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ABSTRACT

Data gathered during a year-long sociolinguistic study of participant perspectives of classroom discourse are presented in this final report. Elementary school students gave their perceptions of (1) the formal rules or expectations governing discourse at school, in play groups, and at home; (2) appropriate forms to get attention or influence others; and (3) discontinuities between discourse at home and at school. Although pupils recognized discontinuities between formal rules of discourse at home and at school, no ethnic or achievement level differences emerged in pupil responses. Identification of appropriate forms of address reflected pupils' awareness of their different status across settings. Sharp discontinuities between home and school discourse rules seemed better understood than more moderate discontinuities, and rules governing classroom questioning seemed difficult for the pupils to comprehend. Childrens' general lack of comprehension suggested the need for further research examining relationships between pupil perceptions of classroom questions, behavioral manifestations of understanding rules of discourse, and academic achievement. (It was found that participation in class discussion significantly reduced variance in final reading achievement; sex, entering reading skills, and student-teacher relationship contributed significantly to reducing variance in classroom participation.) Further studies were recommended to investigate indirect relationships between home-school discontinuities in rules of discourse and pupil success in school. (Author/DB)

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Final Report;
Participant Perspectives of Classroom Discourse

Part III:

RULES OF DISCOURSE, CLASSROOM STATUS, PUPIL PARTICIPATION, AND ACHIEVEMENT IN READING: A CHAINING OF RELATIONSHIPS

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PS012541

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ABSTRACT

This report presents data on one aspect of a year-long sociolinguistic study of participant perspectives of classroom discourse. The subjects were 165 pupils in six second, third, and fourth grade classrooms in a lower socio-economic, multiethnic elementary school. A variety of data collection tasks were used in the study to gather information on pupil perceptions of classroom discourse, including videotape playbacks of actual lessons and of conversations in families and in play groups.

This paper reports on data gathered regarding pupil perceptions of the formal rules or expectations governing discourse in the three settings, appropriate forms to use in getting attention or in influencing others in the three settings, and pupil-perceived discontinuities between discourse at home and at school. In addition, data on teacher perceptions of pupils' communicative behavior and probability of success in reading are reported upon. Simple descriptive statistics, Chi-square, and regression analysis have been used to examine relationships among pupil and teacher responses to the data collection tasks, and other variables of interest.

Findings indicate that pupils are very aware of discontinuities between formal rules of discourse at home and at school. No ethnic or achievement level differences were found in this regard. Pupil identification of appropriate forms of address in the three settings reflects an awareness of differential status of participants within each setting, as well as across settings. The data suggest that sharp discontinuities between home and school are better understood by pupils than more moderate discontinuities. Rules regarding classroom questioning appear to be the most "muddled" for pupils in this study, pointing to the need for closer examination of relationships between: pupil perceptions of classroom questioning; a behavioral manifestation of understanding of the rules of discourse surrounding classroom questioning (i.e., participation in class discussion); and pupil success in school. Participation in class discussion is identified as an important variable, contributing significantly to reduction of variance in final reading achievement. Status variables of sex, entering reading achievement, and status with teacher contribute significantly to reduction of variance in participation in class discussion. Pupil perceptions of the function of classroom questions and teacher praise also are related to frequency of participation in class discussion. It is concluded that further studies should be directed toward a search for <u>indirect</u> relationships between home-school discontinuities in the rules of discourse and pupil success in school.

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INTRODUCTION

Interest in sociolinguistic studies of the classroom has developed gradually over the past several years, sparked initially by political pressures for educational equity for bilingual pupils, fanned by the NIE panel report on Teaching as a Linguistic Process in a Cultural Setting (1975), and fueled by the inclusion of eight sociolinguistic studies among those funded under the 1978 grants program of NIE's Teaching and Instruction Division. Genishi (1979) has pointed out that research in the 1960's capitalized on the linguistic deficits of children, but that more recent sociolinguistic studies have the intent of describing how children demonstrate their communicative competence, in interactions with teachers, rather than yielding generalizations about ethnic or social class differences. Wallat and Green (in press) suggest that an important future direction for sociolinquistic studies of classrooms is to go beyond these demonstrations of the child's knowledge to investigate "how individuals learn to recognize when to speak and when to remain silent during different instructional contexts."

These apparent trends in sociolinquistic studies of classrooms are appropriate given the basic concepts which guide researchers in this field. The major question which sociolinguists ask is: what differences in form, content, and sequence make one sentence different from another with regard to the kind of situation it is (e.g., intimate, formal), the kind of act it is (e.g., request, command), or the kind of person who talking (e.g., student, teacher) (Hymes, 1972). A basic assumption which has influenced researchers in recent years is that children develop communicative competencies that are appropriate for their social groups, and that what teachers define as inadequate communicative behavior may in fact be appropriate behavior in the child's home setting. Thus the emphasis has been on investigating differences between perceptions of teachers and pupils about what is appropriate language behavior, and on identi-

fying discontinuities between language at home and language at school, in the belief that these may be strong contributing factors in the low school achievement of minority group children.

Cazden (1978) has noted that children are capable of coping with differential language demands, and has argued that three possible relationships may exist between any two different language settings. These are:

1) Interference or negative transfer, e.g., when something the child knows or values interferes with what the school is trying to teach;

2) Neutral or parallel relationship, e.g., when two situations, though different, coexist separately in the child's world, without interfering with or enhancing each other; and

3) Positive transfer, e.g., when one situation activates and utilizes the competencies and preferences which were developed in the other situation.

Cazden suggests that while researchers have concentrated on describing interference or negative transfer, educators must learn somehow to create positive transfer.

The study to be reported here was designed to examine the problem of pupil-teacher and home-school discontinuities by investigating pupil and teacher perceptions of classroom discourse, following Stubbs (1976) warning that "research on children and classrooms is usually done by outsiders, but ultimately it is only the participants in a situation who have full access to all its relevant aspects." The particular aspects of classroom discourse to be discussed here are the stated "rules" that govern talking in lessons, and the ways in which classroom status variables operate in the playing out of these rules. Other aspects of the study are presented in other segments of this final report (Part I, the units and salient features of classroom language; Part II, the functions of the classroom question cycle; Part IV, descriptions based on alternative systems for analysis of classroom discourse; Part V, language in play settings).

The Research Paradigm

The general paradigm that has been used to guide this study is presented in Figure 1. In this model the child's perceptions of discourse at home/play and at school and his/her participation in classroom discourse are viewed as intervening variables between family language factors, or classroom language factors, and eventual success in school. The lines indicate the types of relationships we are examining in the total study. The double lines indicate the relationships to be discussed in this segment of the final report.

Each of the boxes in this model represents a set of variables. In this report only the variables associated with understanding and applying the "rules" of classroom discourse (who talks to whom, when, and what do they say) will be discussed. Figure 2 identifies these variables in more detail. These variables are self-explanatory, or will be explicated in the process of reporting on data collection procedures and findings. It may be well to note, however, that special emphasis is given here to the child's status, both social and academic, in the ongoing classroom. This is an essential factor to be considered in examining the rules of classroom discourse, since sociolinguists identify status as a key variable in understanding verbal interaction in any social setting. It would of course, be possible to restrict our consideration of status to pupils in the aggregate, and examine discourse rules only in relation to differences between pupil status and teacher status. However, we have elected to take Barr and Dreeben's (1977) criticism of classroom research seriously and examine the differential status of individual pupils as this may affect transactions within classrooms.

The variables of entering reading achievement, status with peers, and status with teacher are all examples of acquired status within the school and classroom setting, and, so such, are reasonably placed under the label "success" in school.

FIGURE 1

A General Paradigm for Analysis of Participant Perceptions of Classroom Discourse

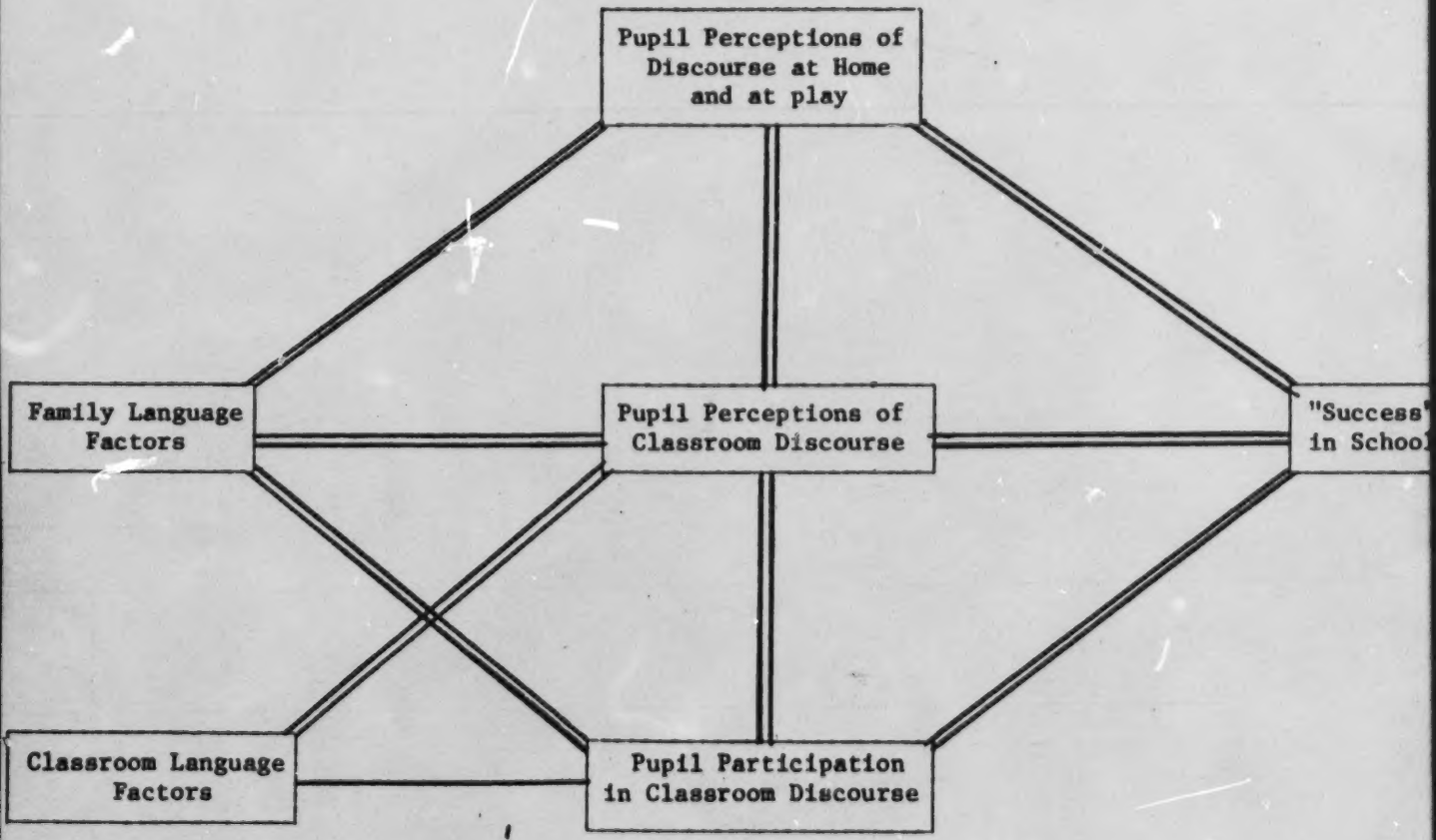
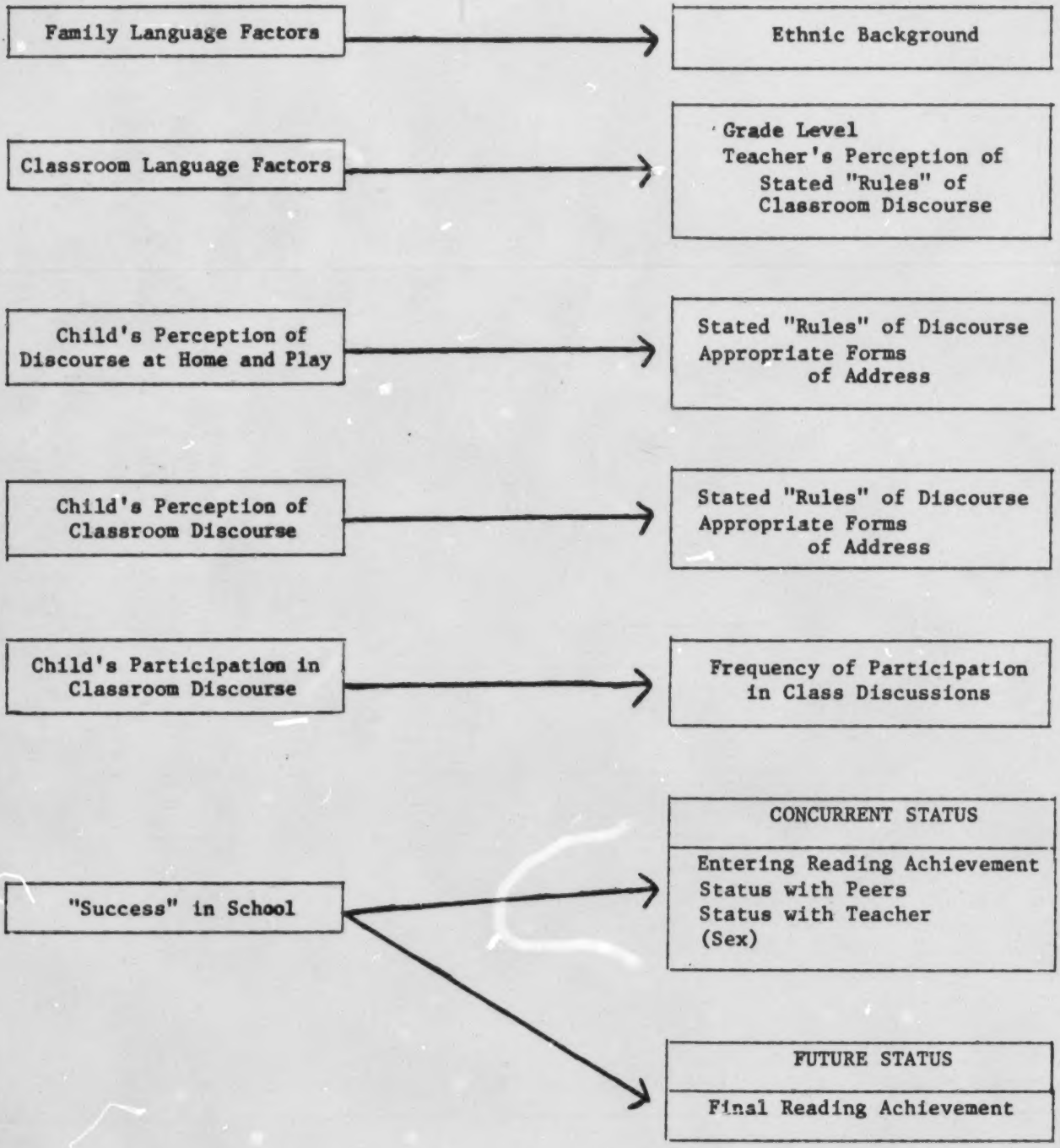

Pupil Perceptions of Discourse at Home and at play
Family Language Factors
Pupil Perceptions of Classroom Discourse
"Success" in School
Classroom Language Factors
Pupil Participation in Classroom Discourse

FIGURE 2

Identification of Specific Variables
Considered in Analysis of Discourse Rules



The "assigned" status variable of sex is clearly a different matter. It is not, strictly speaking, a measure of success in the school setting, but it is a status variable of importance. We place it in the Concurrent Status category, set off by parentheses to indicate that it is a special instance of classroom status.

Investigative Questions

Four major questions are addressed in this report. They are:

1) What do pupils conceive to be the "rules" that govern classroom discourse?

   a. Do these vary by grade level or by classroom/teacher?

   b. Do these vary by ethnic background, academic ability, or classroom social status of the pupil?

2) How closely do the rules of classroom discourse as conceptualized by pupils correspond to the rules as identified by teachers?

   a. Does the amount of correspondence vary by classroom/teacher?

   b. Does the amount of correspondence vary according to pupil status with the teacher?

3) What differences do pupils notice between the rules of classroom discourse and the rules of discourse at home or in play settings?

   a. Do these differences vary by grade level or by classroom/teacher?

   b. Do these differences vary by ethnic background or academic ability?

4) What differences do teachers notice among pupils with regard to communicative behavior in the classroom?

   a. Are teacher rankings of pupils on several different types of communicative behavior interrelated?

   b. Are there relationships between teacher expectations for pupil success in reading and their rankings of pupils on communicative behavior?

   c. Does the amount of teacher-pupil correspondence in identifying the rules of classroom discourse vary according to teacher-perceived differences in pupils' communicative behavior?

PROCEDURES

Subjects

The subjects of this study are 164 children, and their teachers, in six second, third, and fourth grade classrooms, in a single school located at the southern end of the San Francisco Bay. The school is located in a lower socioeconomic, multiethnic, urban area, consisting mainly of small, single family dwellings. Stable, two parent families predominate, and the school population is also remarkably stable for a lower SES community. About 45% of the pupils are Mexican-American, 35% are Anglo, 11% Black, and 9% other minority groups, including primarily children of Asian and Portuguese extraction. The six teachers are all female, and all have been teaching for many years. Four are Anglo, one is Black, and one is Portuguese.

Data Collection Procedures

The basic data collection procedure for this study involved videotaping six language arts lessons in each classroom over the first half of the school year (September through January). The videotaped lessons were played back to pupils and teachers on the same day that they were taught. Each pupil viewed three different lessons, working individually with a data collector, and responding to a variety of data collection tasks. Each teacher viewed all six lessons, and responded to many of the same data collection tasks as did the pupils. Videotapes of conversations in the families of three third grade children in the study (one Anglo, one Mexican-American, and one Black) were used to collect information on perceptions of discourse at home. In addition, a play group was formed of six children in each classroom, randomly selected (stratified by sex and peer status), and videotapes were made of these six play groups, each interacting in a relatively unstructured setting, provided with a variety of construction toys. These videotaptes were used to collect information on perceptions of discourse in play settings.

Several of the data collection tasks involved pupil reports of what they heard being said in the videotaped conversations, and explaining the reasons they thought people had for saying what they did. Findings resulting from these tasks are presented in Parts I and II of this final report. For the topics under discussion here, the videotapes were a stimulus for later discussion by the pupil, but were not directly involved in the data collection tasks. The tasks associated with rules and appropriate forms of discourse are described in detail in the appendix to this report, and are presented more briefly below.

Rules governing classroom discourse. One task was used to gather data on children's perceptions of the "rules" surrounding discourse in each of three settings. In September an open-ended question was asked of each pupil, as follows:

> Suppose a new boy/girl came into your classroom, and you wanted to help them understand how people talk in your class. What would you tell them?... When do kids talk, and what kinds of things do they say?... When does the teacher talk, and what kinds of things does she say?... What else would you want to tell a new child about how people talk in your class?

Pupil responses to these questions were recorded and analyzed. Based on the information that seemed to be pertinent to pupils, a set of uncompleted sentences was developed to gather more structured data on pupil perceptions of who talks when, and for what reasons. In January this sentence completion task was administered with the following instructions: "I'm going to read you some sentences that aren't finished, and I want you to finish each sentence so it will tell something about how you and other people talk in your classroom." Examples of these sentences are included in tables in the section on findings. The same basic sentences were used for each of the three settings (e.g., When my teacher wants me to be quiet, she...; When my mother wants me to be quiet, she...; When my friend wants me to be quiet, (s)he...). the sentence completion tasks asking pupils to describe "how people talk in your family," and "how you talk when you're

playing with your friend," were administered in May. Teachers as well as pupils responded to the sentence completion task on "how people talk in your classroom," and were asked to complete these sentences as a child would who "really understood the rules that operate in your classroom."

Appropriate forms for directives and attention-getting. Another type of task was used to examine pupil perceptions of form/function relationships with regard to directive and attention-getting functions in the three settings. In May, each pupil was presented with a set of sentences that might function as directives, selected because they had appeared in one or more of the videotapes and/or had been reported frequently by pupils as language that they used or heard in one or more of the three settings. (The sentences used are presented in tables in the section on findings). Each sentence was written on a 3x5 card and was displayed in a random array in front of the pupil. The data collector read the sentences aloud, and asked, "Which of these things might someone say to you if they wanted to get you to do something?" The pupil selected whatever cards seemed appropriate to him/her, and the selection was recorded. The cards were then returned to the array, and the pupil was asked, "Which of these things might your mother say to you, if she wanted to get you to do something?" Again, the cards selected were recorded, and the random array was reestablished. The same procedure was followed with two additional questions: "Which of these things might your teacher say to you, if she wanted to get you to do something;" and "Which of these things might your friend say to you, if (s)he wanted to get you to do something?"

After the pupil had identified the sentences (s)he thought might function as directives in each of the three settings, (s)he was asked to generate additional instances. The following questions were asked: "Can you think of some other things your friend might say to you, if (s)he wanted to get you to do

something;" "What would you say to your friend if you wanted to get him/her to do something;" "Can you think of some other things your mother and father might say, in order to get you to do something;" "What would you say to your mother and father, if you wanted to get them to do something;" "Can you think of some other things your teacher might say, if she wanted to get you to do something;" "What would you say to your teacher, if you wanted to get her to do something?" Responses to each of these questions were recorded.

The same procedure was followed with a second set of sentences which might function as attention-getters. These sentences also were selected because they had occurred on the videotapes and/or had been reported frequently by pupils in connection with other tasks. This task was not administered to teachers.

Additional data. Videotapes of the lessons were used to produce transcripts of each class discussion, and seating charts provided by the teacher were used to identify the pupil who made each comment, wherever possible. These data were used to derive a measure of frequency of participation in discussion over six lessons for each pupil, and within each classroom pupils were classified as high, middle, or low in frequency of participation, based on the overall patterns of participation in that class.

To gather information on pupil status in the peer group, each child (in January) was presented with an array of photographs of children in the class, given a series of scenarios, and asked to select the three children most likely and least likely to fit each scenario. The episodes involved selection of a team for a sports contest, selection of a team for a TV quiz show, identification of the children who would be likely (or unlikely) to take charge and know what to do if there were an accident in the classroom and no adults were around, and identification of the children who would probably be observed "hanging around" with the pupil if (s)he were followed for a week. Composite scores were developed

for each pupil according to how frequently (s)he was mentioned under "most likely" and "least likely" categories, and within each classroom pupils were classified as high, middle, or low in peer status, on the basis of these composite scores.

Data on teacher perceptions of pupils' communicative behavior were collected by asking teachers to group children on the basis of several different language characteristics, which had been identified in earlier studies as salient features to teachers (Morine-Derhsimer, 1979; Morine & Vallance, 1975). In September, October, and December teachers were presented with a set of 3x5 cards, each containing the name of a pupil in their classroom, and asked to sort, or group, the pupils according to: their participation in class discussions; their attentiveness during lessons; their tendency to follow the "no-talking" rules of the classroom; their use of "standard English;" and their probability of success in reading achievement for the year. (In September, most teachers in this study declined to group students on the basis of use of standard English, saying that all of the children in their classes spoke standard English, whatever that was, although in fact there was fairly wide variance in pupils' use of what many would consider correct grammar or usage.) Teachers' groupings of pupils in December, when the classroom was well established, were used to develop composite scores of their ratings of pupils, and these were used as measures of pupil status with the teacher. Within each classroom pupils were classified as high, middle, or low in status with the teacher on the basis of these composite scores. In addition, the groupings were used to examine relationships among teacher rankings of pupils on the various communicative behaviors.

Pupil "entering" reading achievement scores were based on the results of the Metropolitan Achievement Test which was routinely administered by all teachers in the school in October. Within each clssroom these scores were or-

ganized by quartiles, based on the national test norms, since the state-funded reading improvement in the school was evaluated on the basis of the number of pupils who moved up from below the first or second quartile in reading achievement during the course of the school year.

"Final" reading achievement was measured by scores on the Metropolitan Achievement Test which was administered in the fall following our year of data collection. In examining the factors that might be related to final achievement, we have used regression analysis to control for entering reading achievement.

Data Analysis

For each task administered, pupil responses were reviewed and category systems were developed to reflect the pattern of these responses. These category systems are described briefly in the section on findings, and are presented in greater detail in the appendix to this report. Intercoder reliability in use of these category systems was checked by having two separate coders code all responses for one or more classes. In all cases agreement was above .90.

When all pupil responses had been coded, these data were combined with background information on pupils (ethnic group, grade level, classroom, etc.) and the SPSS and SAS computer programs were used to identify general patterns of responses, as well as relationships between patterns of response and other pupil variables. In addition, pupil responses were compared across the two settings of home and school, and within the school setting, the pupil responses were compared to those of their teachers.

Most of the variables examined in this report are qualitative, or have been treated as qualitative in order to make comparisons across classrooms. In several instances, decriptive data are reported, but no tests of significance have been made. Where appropriate, nonparametric statistics have been used to test the significance of relationships. Regression analyses (performed by the SAS

computer program) have been used to identify the factors that contribute to status with teacher, participation in class discussions, and final reading achievement. (See appendix for details on statistical procedures.)

It should be noted that this is an exploratory study, and that a large number of relationships have been examined. The reader is reminded that significant relationships which have been identified must be viewed conservatively for this reason.

FINDINGS

Participant Perceptions of the Rules of Classroom Discourse

The sentence completion task was designed to elicit statements about the formal rules that govern classroom discourse. In effect, pupils are reporting their understanding of how everyone ought to behave during lessons, not necesarily their sense of how everyone does behave. Pupil and teacher responses to this task are presented in Table 1. The sentences are organized according to three major topics: being quiet and not talking; asking and answering questions; getting information/assistance/praise.

Pupil and teacher responses. There are no big surpises in pupil responses to this task, but there are a few points of non-correspondence between pupils and teachers that are worth noting. For example:

1) When the teacher is talking, pupils believe they should "be quiet," but teachers expect them to "listen;"

2) Pupils say they ask a question "when the teacher's not talking," or "when I'm s'posed to," but teachers believe that pupils ask questions when they need help or want to know something; and

3) Teachers report that they give praise when it is deserved, while pupils agree that praise generally occurs because it is deserved, but most of them see it as directed at other pupils, rather than themselves.

These are also a few areas of very strong agreement between teachers and

TABLE 1

Pupil and Teacher Statements of the Formal Rules of Classroom Discourse

Being Quiet and Not Talking

1. When the teacher wants me to be quiet, she...

	Pupils (N=143)	Teachers (N=6)
signals (e.g., rings the bell)	70	2
requests	12	2
commands (moderate)	47	1
commands (sharp)	10	0
other/no response	4	1

2. When the teacher talks, I ...

	Pupils (N=143)	Teachers (N=6)
be quiet	89	1
listen	49	5
converse	4	0
other/no response	1	0

3. I don't talk when...

	Pupils (N=143)	Teachers (N=6)
the teacher or someone else is talking	118	4
other "quiet" rule	23	2
non-rule reason	19	0
no response	0	0

4. The teacher doesn't talk when...

	Pupils (N=143)	Teachers (N=6)
I'm/we're talking	77	4
other "quiet" rule	33	1
non-rule reason	28	1
no response	5	0

Table 1 (continued)

5. At recess, I talk to...

	Pupils (N=143)	Teachers (N=6)
an adult	2	0
a child	141	6
no one	0	0
myself	0	0
no response	0	0

6. When I'm doing my work, I talk to...

	Pupils (N=143)	Teachers (N=6)
an adult (teacher aide)	55	4
a child (neighbor)	28	0
no one	54	2
myself	2	0
no response	4	0

7. When I finish my work, I talk to...

	Pupils (N=143)	Teachers (N=6)
an adult	42	0
a child (friend, neighbor)	70	6
no one	28	0
myself	1	0
no response	2	0

Asking and Answering

8. If I know the answer to a question, I...

	Pupils (N=143)	Teachers (N=6)
signal (raise my hand)	107	6
give the answer	22	0
acknowledge knowing	7	0
keep quiet	3	0
evaluate own ability or question difficulty	2	0
no response	2	0

Table 1 (Continued)

9. If I don't know the answer to a question, I...

	Pupils (N=143)	Teachers (N=6)
don't signal (don't raise hand)	67	3
signal	12	0
try to find out	29	1
acknowledge not knowing	10	0
keep quiet	22	2
evaluate own ability or question difficulty	1	0
no response	2	0

10. I ask a question when...

	Pupils (N=143)	Teachers (N=6)
I want to know	12	3
I need help	47	3
(invokes "talking" rule) e.g., when the teachers' not talking	57	0
(gives situational response) e.g., when we're doing math)	15	0
unrestricted, e.g., when I want to	1	0
other/no response	12	0

11. The teacher asks a question when...

	Pupils (N=143)	Teachers (N=6)
she wants to know	9	2
she needs help	9	0
(gives instructional purpose)	51	4
(invokes "talking" rule)	24	0
(gives situational response)	38	0
unrestricted	4	0
no response	8	0

Getting Information/Assistance/Praise

12. When I want to ask something, I...

	Pupils (N=143)	Teachers (N=6)
signal for attention	116	5
just ask	19	1
follow "politeness rule"	7	0
other/no response	1	0

Table 1 (Continued)

13. When I need help, I...

	Pupils (N=143)	Teachers (N=6)
signal for attention	95	3
ask an adult	40	3
ask a child	3	0
no response	5	0

14. The teacher says "good" when....

	Pupils (N=143)	Teachers (N=6)
(deserved-academic)	28	3
(deserved-nonacademic)	5	0
(deserved-unspecific)	11	2
(outside evaluation) "she thinks"	2	1
(convoluted)	0	0
(not necessarily directed toward child)	95	0
other/no response	2	0

pupils. For example:

1) Most pupils and teachers agree that the pupil doesn't (shouldn't) talk when the teacher or someone else is talking;

2) There is substantial agreement that when a pupil finishes his/her work, (s)he is free to talk to a friend or neighbor; and

3) There is clear agreement that when pupils know the answer to a question or want to ask something, they raise their hand.

These rules are fairly standard across classrooms, and are articulated by most pupils without hesitation.

Pupil-teacher correspondence. To examine pupil-teacher correspondence on the rules of classroom discourse more carefully, however, we must look at individual classrooms, for not all teachers agree on what is appropriate behavior. Table 2 presents the data on pupil-teacher correspondence with regard to five pairs of sentences for each of the six classrooms.

The most agreement across all classes occurs for answering a question and getting information/assistance. These are the sentences that deal with the "raising your hand" rule. There is obviously widespread agreement on the appropriate use of this signal. The least agreement across all classes occurs for asking a question. There is little apparent agreement between individual teachers and their pupils about when/why questions are asked, and this stems primarily from the sentence on when pupils ask questions. Interpretations of the functions of teacher questions are examined in detail in Part II of this final report, and there is fairly good agreement that when teachers ask questions it is for the instructional purpose of "telling or teaching."

The classroom which exhibits the strongest agreement between teacher and pupils is that of Teacher D. This third grade teacher had one consistent signal for getting attention or quiet in the room (ringing a bell), and every pupil knew that signal. In addition, Teacher D periodically reminded pupils about "our standards" during lessons. In this class the teacher's expectations

TABLE 2

Pupil-Teacher Correspondence
on Sentence Completion Task

By Classroom
(Number of Pupils Agreeing with Teacher)

	Teacher A (N=24)	Teacher B (N=23)	Teacher C (N=28)	Teacher D (N=28)	Teacher E (N=20)	Teacher F (N=20)
Being Quiet (Sentences 1 & 2)	2	1	8	16	0	0
Not Talking (Sentences 3 & 4)	5	0	1	10	5	0
Answering a Question (Sentences 8 & 9)	10	12	9	4	8	0
Asking a Question (Sentences 10 & 11)	0	0	2	2	0	0
Getting Information/ Assistance (Sentences 12 & 13)	16	17	14	9	6	1

had been carefully stated and frequent reminders were pleasantly, but clearly, in evidence.

Teacher F shows the least correspondence with pupils. The fact is that Teacher F shows little correspondence with other teachers as well, disagreeing on 5 of the 10 sentences discussed here. Teacher F has been identified elsewhere (see Part I) by a sociolinguistic specialist as a rare example of the use of a "natural conversational style" in the classroom. The marked lack of teacher-pupil agreement in this classroom stems at least partially from the fact that students responded to the sentence completion task in rather typical patterns, identifying the standard rules of discourse, while the teacher responded in somewhat atypical fashion. This lack of correspondence in stating the rules is not reflected in classroom behavior problems. Teacher F's classroom is an exceptionally relaxed and well-managed setting for instruction.

It would appear from Table 2 that there are some grade level differences in the degree of pupil-teacher correspondence on the rules of discourse. Both fourth grade classrooms (Teachers E and F) show considerably less correspondence than the third grade classrooms (Teacher B, C, and D), with the second grade (Teacher A) falling somewhere between these two "extremes." No tests of significance have been conducted here, but it might be interesting to pursue this further. It may be that during the primary grade years the formal rules of classroom discourse are overlearned, or become stereotypes for pupils, so that they may not perceive a somewhat different, perhaps looser, formulation of rules by intermediate grade teachers.

One might expect that pupils who were ranked high by teachers on such communicative behaviors as "listens attentively," "participates in class discussions," and "follows the no talking rules" would display more correspondence with teachers in their statements of the formal rules of classroom discourse

than pupils ranked low on these characteristics, but such is not the case for pupils in this study. Table 3 presents the data on pupil-teacher correspondence for the four sentences on which teachers agreed the most among themselves, (i.e., the "standard rules") with pupil responses organized by status with teacher (the composite score for teacher ratings on pupils' communicative behavior). There are no significant differences in patterns of pupil response based on this pupil status variable. When the data are examined classroom by classroom for each of the ten pairs of sentences, the numbers are too small for tests of significance, but the same apparent lack of relationship holds in all but two instances (see Table 4 for several examples.)

This suggests that for the most part teacher perceptions of pupils' communicative behavior are not closely related to pupil agreement with the teacher in stating the formal rules of classroom discourse, i.e., teacher perceptions do not reflect pupils' formal knowledge of teacher expectations. At least two possible interpretations can be advanced. One is that teacher perceptions of pupil behavior are rather inaccurate, and the other is that pupils' formal understanding of the rules is not necessarily reflective of their operational understanding (i.e., their real communicative behavior). Some combination of these two possibilities could also account for this finding. These alternative explanations will be explored further in relation to other findings in this study.

Home/play - school discontinuities. It may seem inappropriate to talk about the "formal" rules of discourse in informal settings such as family conversations and play group interactions, but it is the case that there are certain expectations of appropriate verbal behavior in any ongoing social group. In comparing pupil statements about the formal rules of classroom discourse with their statements about expectations in the informal settings of home and play

TABLE 3

Pupil-Teacher Correspondence on Four
Rules of Classroom Discourse
Organized By Pupil Status with Teacher

Rule: When the teacher talks, I... listen.

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	32	17
Middle	27	21
Low	27	15

Rule: If I know the answer to a question, I... raise my hand.

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	41	8
Middle	37	11
Low	26	16

Rule: When I want to ask something, I... raise my hand.

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	42	7
Middle	40	8
Low	30	12

Rule: When I finish my work, I talk to... my neighbor.

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	25	24
Middle	22	26
Low	20	22

TABLE 4

Illustrative Examples of Pupil-Teacher Correspondence in Rules of Discourse By Classroom and Status with Teacher

Teacher A

Rules for Answering Questions

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	4	4
Middle	5	3
Low	1	7

Rules for Getting Information/Assistance

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	6	2
Middle	6	2
Low	4	4

Teacher C

Rules for Answering Questions

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	2	6
Middle	6	5
Low	1	7

Rules for Getting Information/Assistance

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	3	5
Middle	6	5
Low	4	4

Teacher D

Rules for Being Quiet

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	6	3
Middle	5	4
Low	5	5

Rules for Getting Information/Assistance

Status with Teacher	Pupil-Teacher Correspondence	Lack of Correspondence
High	6	3
Middle	1	8
Low	2	8

groups, we are attempting to identify the classroom expectations that seem to children to be most similar to and most different from the expectations in the other settings which are most familiar to them. Table 5 presents these data.

With regard to expectations for being quiet and not talking, the following items are worth noting:

1) When a teacher wants quiet, she is expected to use a signal (turns out lights, rings a bell), but mothers and playmates are expected to give commands, and they are seen as giving sharp commands ("Shut up!") proportionately more often than teachers;

2) When teachers and mothers talk, children say that they keep quiet, but when playmates talk, they listen;

3) Politeness rules for not talking are expected to operate more strongly at play than at home;

4) Pupils are expected to be more bound by politeness rules than teachers, and mothers and playmates seem to be seen as following these rules more than the children who are reporting;

5) There are few differences between home and school with regard to expectations about whom children talk to when playing or when work is done; and

6) While children are working, the expectations that they may talk to an adult are similar at home and at school, but talking to a child is a stated expectation at home more than at school, and talking to no one is a stated expectation at school more than at home.

With regard to expectations for asking and answering questions, it is hardly surprising that children indicate they are expected to raise their hand in school if they know the answer to a question, while at home or play, they just answer it, but the following results are somewhat more interesting:

1) The expectation is that children will directly acknowledge not knowing the answer, to a question ("I don't know") at home or play, while at school the acknowledgement is indirect ("don't raise my hand");

2) The expectation that a child will try to find out the answer to a question if (s)he doesn't know it is stronger at school than at home or play, but the tendency to evaluate ability or question difficulty, whether or not the answer is known (I'm smart, I'm dumb, that's an easy question, that's a hard question) is much stronger at home and play than at school;

TABLE 5

Pupil Statements of the "Rules" of Discourse
in Three Settings
(percent of pupils participating)

Being Quiet and Not Talking

1. When _____ wants me to be quiet, (s)he...

	School (N=143)	Home (N=142)	Play (N=142)
signals	49.0	3.5	6.3
requests	8.4	6.3	7.0
commands (moderate)	32.9	69.7	63.4
commands (sharp)	7.0	16.9	19.7
other/no response	2.8	3.5	3.5

2. When _____ talks, I ...

	School (N=143)	Home (N=142)	Play (N=142)
be quiet	62.2	52.1	38.7
listen	34.3	36.6	50.0
converse	2.8	7.0	6.3
other/no response	.7	4.2	4.9

3. I don't talk when...

	School (N=143)	Home (N=142)	Play (N=142)
someone else is talking	82.5	35.3	57.0
other "quiet" rule	16.1	30.3	11.2
non-rule reason	13.3	32.4	26.1
no response	0.0	2.1	5.6

4. _____ doesn't talk when...

	School (N=143)	Home (N=142)	Play (N=142)
someone else is talking	53.9	48.6	78.8
other "quiet" rule	23.1	20.4	3.7
non-rule reason	19.6	29.6	16.9
no response	3.5	1.4	.7

Table 5 (continued)

5. When I'm playing, I talk to...

	School (N=143)	Home (N=142)
an adult	1.4	1.4
a child	98.6	93.7
no one	0.0	3.5
myself	0.0	.7
no response	0.0	.7

6. When I'm doing my work, I talk to...

	School (N=143)	Home (N=142)
an adult	38.5	41.5
a child	19.6	37.3
no one	37.8	13.4
myself	1.4	7.7
no response	2.8	0.0

7. When I finish my work, I talk to...

	School (N=143)	Home (N=142)
an adult	29.4	32.9
a child	49.0	51.7
no one	19.6	11.2
myself	.7	3.5
no response	1.4	.7

Asking and Answering Questions

8. If I know the answer to a question, I...

	School (N=143)	Home (N=142)	Play (N=142)
signal	74.8	.7	1.4
give the answer	15.4	70.4	59.9
acknowledge knowing	4.9	9.9	14.8
don't acknowledge knowing	2.1	.7	1.4
evaluate own ability or question difficulty	1.4	11.3	16.9
no response	1.4	.3	4.9

9. If I don't know the answer to a question, I...

	School (N=143)	Home (N=142)	Play (N=142)
don't signal	46.9	0.0	.7
signal	8.4	0.0	.7
try to find out	20.3	10.6	10.6
acknowledge not knowing	7.0	50.7	43.7
don't acknowledge not knowing	15.4	16.2	20.4
evaluate own ability or question difficulty	.7	14.8	19.7
no response	1.4	7.7	4.2

10. I ask a question when...

	School (N=143)	Home (N=142)	Play (N=142)
I want to know	8.4	15.5	19.7
I need help	33.2	45.1	32.4
(invokes "talking" rule)	39.9	17.6	15.5
(gives situational response)	10.5	14.8	17.6
-unrestricted-	.7	2.1	7.0
other/no response	8.5	4.9	7.7

11. _____ asks a question when...

	School (N=143)	Home (N=142)	Play (N=142)
(s)he wants to know	6.3	23.2	26.8
(s)he needs help	6.3	19.0	31.7
(gives instructional purposes)	38.7	9.1	2.1
(invokes "talking" rule)	16.8	12.7	12.0
(gives situational response)	26.6	25.4	16.2
-unrestricted-	2.8	5.6	4.9
no response	5.6	4.9	6.3

Getting Information/Assitance/Praise

12. When I want to ask something, I...

	School (N=143)	Home (N=142)	Play (N=142)
signal for attention	81.1	41.5	46.2
just ask	13.3	45.1	44.1
follow "politeness" rule	4.9	12.0	6.3
other/no response	.7	1.4	3.5

Table 5 (continued)

13. When I need help, I...

	School (N=143)	Home (N=142)	Play (N=142)
signal for attention	66.4	4.2	11.3
ask an adult	28.0	82.4	9.9
ask a child	2.1	13.4	76.1
no response	3.5	0.0	2.8

14. _____ says "good" when...

	School (N=143)	Home (N=142)	Play (N=142)
(deserved-academic)	19.6	28.2	6.3
(deserved-nonacademic)	3.5	24.6	22.5
(deserved-unspecified)	7.7	42.3	33.8
(outside evaluation) - e.g., "she thinks"	1.4	.7	6.3
(convoluted) - e.g., "I fall down"	0.0	.7	4.9
(not necessarily directed toward individual child)	66.4	2.8	21.1
other/no response	1.4	.7	4.9

3) It is expected that children ask questions at school, home, or play when they need help, but at school there is the added expectation that they do this at the "allowed" time;

4) Teachers are expected to ask questions in order to teach, while mothers ask when they want to know something and, playmates ask when they need help; and

5) Asking questions is seen as a situational activity for mothers as often as for teachers (the teacher asks a question when we're doing math, and my mother asks a question when she's cooking supper).

With regard to getting information, assistance, or praise, the following expectations can be noted:

1) Signaling to get attention before asking for information is essential at school, but surprisingly, getting attention first is important in home and play settings too ("Hey, Mom, come here" or "Hey, you guys");

2) Praise directed at the individual child is easier to come by at home than at school or play.

It is clear from these data that, in a general sense, children perceive definite differences in the rules of discourse at school and in more informal settings. This is hardly to be wondered at, for the reality is that differences in expectations do exist in these settings, and children could not function in the school setting if they were not aware of the differences. A more important question is whether different children perceive these settings differently. For pupils in this study there were no significant differences by either ethnic background or entering reading achievement in responses to the sentence completion task for either the school or home setting. Examples of the patterns of responses to several key sentences are presented in Table 6, to illustrate this lack of systematic variation. It is evident that, while not all pupils state the same types of expectations, their differences in perception are not related to such status variables as ethnicity and entering reading achievement.

We cannot drop the issue of home-school discontinuities here, however. For it is not a problem simply of general patterns of agreement or disagreement about expectations for behavior. The real question is how many individuals perceive

TABLE 6

Illustrative Examples of Pupil Perceptions
of Rules of Discourse
Organized By Ethnicity and Entering Reading Achievement

Asking and Answering Questions At School

If I don't know the answer to a question, I...

Ethnicity	Acknowledge/ Try to Find Out	Don't Acknowledge
Anglo	20	31
Mexican-American	18	44
Black/Other Minority	13	14

Entering Reading Achievement	Acknowledge/ Try to Find Out	Don't Acknowledge
Above 2nd Quartile	17	31
Below 2nd Quartile	11	27
Below 1st Quartile	24	31

I ask a question when...

Ethnicity	I want to know/ need help	Talking Rule or Situational Response
Anglo	26	24
Mexican-American	21	33
Black/Other Minority	11	15

Entering Reading Achievement	I want to know/ need help	Talking Rule or Situational Response
Above 2nd Quartile	21	23
Below 2nd Quartile	16	22
Below 1st Quartile	21	27

Being Quiet and Not Talking At School

When the teacher talks, I...

Ethnicity	Be Quiet	Listen	Converse	Other/No Response
Anglo	33	17	1	2
Mexican-American	36	21	3	2
Black/ Other Minority	16	10	0	1

I don't talk when...

Ethnicity	Someone Else Is Talking	Other "Quiet" Rule	Non-Rule Reason	Other/No Response
Anglo	44	8	1	0
Mexican-American	50	12	0	0
Black/ Other Minority	23	3	1	0

The teacher doesn't talk when...

Ethnicity	Someone Else Is Talking	Other "Quiet" Rule	Non-Rule Reason	Other/No Response
Anglo	31	8	13	1
Mexican-American	31	19	9	3
Black/ Other Minority	14	6	6	1

When I'm doing my work, I talk to...

Ethnicity	Teacher or Aide	My Neighbor	No one	Other/No Response
Anglo	22	9	18	4
Mexican-American	32	14	24	2
Black/ Other Minority	11	5	11	0

Being Quiet and Not Talking At Home

When my mother talks, I...

Ethnicity	Be Quiet	Listen	Converse	Other/No Response
Anglo	24	20	6	3
Mexican-American	37	21	2	2
Black/ Other Minority	12	11	2	2

I don't talk when...

Ethnicity	Someone Else Is Talking	Other "Quiet" Rule	Non-Rule Reason	Other/No Response
Anglo	20	17	15	1
Mexican-American	21	20	20	1
Black/ Other Minority	9	6	11	1

Table 6 (continued)

My mother doesn't talk when...

Ethnicity	Someone Else Is Talking	Other "Quiet" Rule	Non-Rule Reason	Other/No Response
Anglo	27	10	15	1
Mexican-American	31	14	17	0
Black/ Other Minority	11	5	10	1

When I'm doing my work, I talk to...

Ethnicity	Mother/ Father	Sibling	No One	Other/No response
Anglo	26	13	8	6
Mexican-American	24	26	8	4
Black/ Other Minority	9	14	3	1

discontinuities between the home and school setting, what types of discontinuities they perceive, and which individuals perceive what types of discontinuities. In Table 7 we examine the congruence of expectations at home and school at the level of the individual pupil. To highlight the data presented here for more rapid interpretation, we have bracketed the numbers representing pupils whose responses are congruent for the two settings, and circled the numbers indicating the most frequent types of discontinuity.

A careful analysis of Table 7 suggests that the rules/expectations (sentences) can be separated into three types: Those which are seen as fairly congruent across the two settings; those which are seen as highly discrepant across the two settings, but for which there is strong agreement on the type of discrepancy; and those which are "mixed" (or muddled?), with only moderate frequencies of congruent perceptions and moderate or limited agreement on the type of discrepancy. For example, the following rules/expectations seem to have high congruency:

1) When I'm playing, I talk to... my friend (133 congruent responses);

2) When I've finished my work, I talk to... my neighbor/my brother or sister (80 congruent responses);

3) When _____ talks, I... be quiet (79 congruent responses); and

4) _____ doesn't talk when... someone else is talking (78 congruent responses).

In each of these instances, over half the pupils perceived some congruency in the rule across the two settings.

In contrast, consider the following examples:

1) If I know the answer to a question, I... raise my hand/say it (17 congruent responses, 78 agreed-on discrepant responses);

2) _____ says "good" when... someone gives a good answer/I do something right (18 congruent responses, 90 agreed-on discrepant responses); and

3) When I need help, I... raise my hand/ask my mother (38 congruent responses, 77 agreed-on discrepant responses).

TABLE 7

Pupil Perceptions of Home-School Congruency
in the Rules of Discourse
(number of pupils responding in each category)

Being Quiet and Not Talking

When _____ wants me to be quiet, she...

Home

School	Signals	Requests	Commands	Other/No Response
signals	2	8	(58)	2
requests	0	0	11	1
commands	3	1	50	3
other/no response	0	0	3	0

When _____ talks, I...

Home

School	Listen	Be Quiet	Converse	Other/No Response
listen	26	(18)	2	2
be quiet	(24)	53	8	4
converse	2	2	0	0
other/no response	0	1	0	0

I don't talk when...

Home

School	Someone Else Is Talking	Other "Quiet" rule	Non-Rule Reason	Other/No Response
someone else is talking	51	(25)	(44)	1
other quiet rule	11	5	2	1
non-rule reason	0	1	0	1
other/no response	0	0	0	0

Table 7 (continued)

_____ doesn't talk when...

Home

School	Someone Else Is Talking	Other Quiet rule	Non-rule Reason	Other/No Response
someone else is talking	65	6	(25)	1
other quiet rule	6	2	4	0
non-rule reason	(17)	0	11	0
other/no response	1	1	2	1

When I'm playing, I talk to...

Home

School	Adult	Child	No one	Myself	Other/No Response
adult	1	1	0	0	0
child	1	132	5	1	1
no one	0	0	0	0	0
myself	0	0	0	0	0
other/no response	0	0	0	0	0

When I'm working, I talk to...

Home

School	Adult	Child	No one	Myself	Other/No Responses
adult	29	17	6	3	0
child	7	16	3	2	0
no one	(22)	17	9	5	0
myself	0	1	0	1	0
other/no response	1	2	1	0	0

Table 7 (continued)

, I...

sk Adult	Ask Child	Other/No Response
77	14	0
35	2	0
3	0	0
2	3	0

Myself	Other/No Response
2	0
1	0
2	0
0	0
0	0

good" when...

erved acad.	Deserved Unspec.	Outside Eval.	Convoluted	Not Necess. Directed Toward Indiv. Child	Other/ No Response
8	10	0	0	1	1
2	2	0	0	0	0
3	5	0	0	0	0
0	1	0	0	0	0
0	0	0	0	0	0
21	42	1	1	3	0
1	0	0	0	0	0

Evaluate Ability	Other/ No Response
11	6
3	3
1	0
0	1
1	0
0	0

Evaluate Ability	Other/ No Response
10	5
1	4
5	2
0	0
4	0
1	0
0	0

Table 7 (continued)

I ask a question when...

Home

School	Want To Know	Need Help	Talking rule	Situational Response	Unrestricted	Other/No Response
want to know	7	4	0	1	0	0
need help	6	27	5	5	1	2
talking rule	5	23	12	11	1	4
situational response	3	5	3	3	0	1
unrestricted	0	0	1	0	0	0
other/no response	1	5	4	1	1	0

_____ asks a question when...

Home

School	Wants To Know	Needs Help	To Instruct	Talking Rule	Situational Response	Unrestricted	Other/ No Respo
wants to know	6	1	0	0	2	0	0
needs help	0	5	0	2	2	0	0
to instruct	16	8	5	4	11	4	3
talking rule	1	2	3	5	10	2	1
situational response	7	9	4	5	10	0	2
unrestricted	1	1	0	0	1	1	0
other/no response	2	1	1	2	0	1	1

Getting Information/Assitance/Praise

Home

School	Signal	Do It	Follow Politeness Rule	Other/No Response
signal	47	52	14	2
do it	8	10	1	0
follow politeness rule	4	1	2	0
other/no response	0	1	0	0

Table 7 (continued)

When I need help, I...

Home

School	Signal	Ask Adult	Ask Child	Other/No Response
signal	3	77	14	0
ask adult	3	35	2	0
ask child	0	3	0	0
other/no response	0	2	3	0

_____ says "good" when...

Home

School	Deserved Academic	Deserved Nonacad.	Deserved Unspec.	Outside Eval.	Convoluted	Not Necess. Directed Toward Indiv. Child	Other/ No Response
deserved, academic	8	8	10	0	0	1	1
deserved, non-academic	1	2	2	0	0	0	0
deserved, unspecified	3	3	5	0	0	0	0
outside evaluation	0	0	1	0	0	0	0
convoluted	0	0	0	0	0	0	0
not necessarily directed toward individual	27	21	42	1	1	3	0
other/no response	1	1	0	0	0	0	0

In these instances there is clear agreement on the differences in the two settings.

Both of these types of rules/expectations appear to be well-defined for most pupils. It is the other rules/expectations, where responses are mixed or muddled, for which home-school discontinuities might be most apt to lead to misunderstandings and miscommunication between teacher and pupil.

If we pursue this line of reasoning further, we note that the expectations which are most congruent are those involving children talking during free time, and adults talking to children. The expectations for which there are agreed-on discrepancies are those related to children answering questions when they know the answer, and getting assistance or praise. The expectations which appear to be most "mixed" have to do with asking questions (both adult and child) and children responding to questions when they don't know the answer. For example:

1) If I don't know the answer to a question, I... don't raise my hand/ say I don't know (23 congruent responses, 35 agreed-on discrepant responses);

2) I ask a question when... we're s'posed to/I need help (49 congruent responses, 23 agreed-on discrepant responses); and

3) _____ asks a question when... she wants to tell us something/ she wants to know something (32 congruent responses, 16 agreed-on discrepant responses).

It would appear, therefore, that the possible detrimental effects of home-school discontinuity in the rules of discourse might be most readily observed in relation to questioning. We turn next to examine pupil differences in home-school congruence, with particular attention to the rules surrounding classroom questioning.

Home-school congruence and other variables. For the subjects in this study there were no significant differences in pupil perceptions of home-school congruence in the rules of discourse by ethnic background, by entering reading achievement. Table 8 presents examples of the patterns of response by ethnicity for the

TABLE 8

Home-School Congruency in Expectations
For Asking and Responding to Questions
Organized by Pupil Ethnicity

If I don't know the answer...

	Anglo	Mexican-American	Black/Other Minority
Congruent Response	9	11	3
Lack of Congruency	44	51	25

I ask a question when...

	Anglo	Mexican-American	Black/Other Minority
Congruent Response	18	19	12
Lack of Congruency	35	43	16

_____ asks a question when...

	Anglo	Mexican-American	Black/Other Minority
Congruent Response	11	15	6
Lack of congruency	42	47	32

expectations about asking questions and responding when the answer is not known. Table 9 presents the same data organized by pupils' entering reading achievement, and Table 10 shows them organized by classrooms. Perceptions of congruence, or lack of congruence is clearly quite evenly distributed across pupils with regard to all three variables. Thus it would appear that discontinuities between the formal rules or stated expectations of classroom discourse and discourse at home, even with regard to classroom questioning, are not necessarily more marked for children of minority group cultures than for Anglo children, or for children of one classroom as opposed to another, and that such discontinuities are not necessarily reflected in pupil achievement in reading.

It is the case, however, that careful examination of data on pupil understanding of the functions of classroom questions, reported in detail in Part II of this final report, indicates that there are important relationships between teacher use of classroom questions, pupil understanding of the function of classroom questions, pupil behavior (i.e., participation in class discussions), and pupil success in school. We will return to this point in a later section on interpretations of findings.

Summary. To summarize the findings with regard to pupil perceptions of the formal rules of classroom discourse:

1) Pupils and teachers demonstrate strongest agreement on rules for answering questions and getting information/assistance, all rules that involve the use of the "raise your hand" signal;

2) Pupils and teachers show least agreement on rules about asking a question;

3) Pupil-teacher agreement on formal rules appears to be strongest in the class where the teacher states the rules clearly and reminds pupils of their existence frequently;

4) Teacher rankings of pupils on appropriate language behavior are not directly related to pupil-teacher agreement in stating the formal rules of classroom discourse;

TABLE 9

Home-School Congruency in Expectations for Asking and Responding to Questions Organized by Entering Reading Achievement

If I don't know the answer...

	Below 1st Quartile	Below 2nd Quartile	Above 2nd Quartile
Congruent Response	6	9	7
Lack of Congruency	41	30	42

I ask a question when...

	Below 1st Quartile	Below 2nd Quartile	Above 2nd Quartile
Congruent Response	16	14	17
Lack of Congruency	31	25	32

_____ asks a question when...

	Below 1st Quartile	Below 2nd Quartile	Above 2nd Quartile
Congruent Response	10	9	10
Lack of Congruency	37	30	39

TABLE 10

Home-School Congruency in Expectations
for Asking and Responding to Questions
Organized by Classroom

If I don't know the answer to a question, I...

	Teacher A	Teacher B	Teacher C	Teacher D	Teacher E	Teacher F
Congruent Response	2	4	8	6	1	2
Lack of Congruency	22	19	20	22	19	18

I ask a question when...

	Teacher A	Teacher B	Teacher C	Teacher D	Teacher E	Teacher F
Congruent Response	7	5	11	11	8	7
Lack of Congruency	17	18	17	17	12	13

_____ asks a question when...

	Teacher A	Teacher B	Teacher C	Teacher D	Teacher E	Teacher F
Congruent Response	8	3	4	9	2	3
Lack of Congruency	16	20	24	19	18	17

5) Pupils perceive clear differences in expectations across settings of home, play, and school;

6) Pupil differences in perceptions of home-school congruency in stated/formal rules of discourse are not direcly related to pupil differences in ethnic background or entering reading achievement, or to classroom/teacher;

7) Three types of rules can be identified in relation to home-school congruency of expectations (rules with fairly high congruency, rules with highly agreed-on discrepencies, and rules for which expectations are mixed or muddled);

8) The rules for which expectations are most mixed or muddled are rules about classroom questioning, and it is therefore possible that this is an area where home-school discontinuities in rules of discourse are most detrimental to school achievement; and

9) A prior segment of this final report (Part II) that focuses on classroom questioning provides evidence of relationships among teacher use of questions, pupil perceptions of the functions of questions, pupil participation in class discussions, and pupil success in school, indicating that classroom questioning is an aspect of classroom discourse that is important in school achievement.

Taken together, these findings suggest that we could benefit from concentrating further investigations of classroom discourse on classroom questioning and that we should look for indirect, rather than direct, relationships between pupil perceptions of the formal rules of classroom discourse and pupil success in school.

Pupil Perceptions of
Appropriate Forms of Address

The investigation of pupil perceptions of appropriate forms of address was not originally planned as a part of this study. In the course of data collection it became apparent from pupil reports, and from behavior observed on the videotapes, that certain language functions which we had not planned to examine were important to pupils in all three discourse settings (home, school, play). These were the functions of getting attention and influencing (controlling) others).

We are all accustomed to thinking of these as important language functions for the teacher in the classroom setting. We were only gradually made aware of them as important (perhaps even critical) functions for the child as well. The prevalence of the "raise your hand" rule for getting attention in lessons was not at all surprising, but the "Mom, come here" and "Hey, you guys" language that was reported as a prelude to getting information at home and at play was somewhat unexpected. In further pupil reports about what they might say in talking to their mothers, fathers, or playmates, the attempts to exert influence became quite evident (When are you going to take me to buy some shoes?, When can we go fishing?, Do you want to play kick ball?), as did their strong tendency to use a question form to serve this function. We therefore devised a task to study this form-function relationship further. We report on this investigation here because it revealed relationships between forms of address and status in the social setting, thereby providing evidence of children's perceptions of the rules of discourses related to "who says what to whom."

Identification of forms across settings. Data on pupil identification of sentence forms which function to "get you to do something" or to "get your attention" in each of the three settings are presented in Tables 11 and 12. (The reader will recall that in this task sentences were derived primarily from pupil reports of what they heard on videotapes, that pupils selected as many sentences as they liked in each setting, and that the same sentence could be selected in more than one setting.) Asterisks indicate the "preferred placement" of each sentence within a setting. Since the content of these sentences, as well as their form, is obviously important in any decision about their appropriateness for a given setting, we can draw only limited conclusions from these responses.

Our first conclusion is that the question form is perceived by pupils as

TABLE 11

Identification of Sentences Which Function
To "Get You To Do Something"
(Percent of Pupils Responding; N=154)

	In General	In School Settings	In Play Settings	In Home Settings
Throw me the ball.	61.8	15.4	74.6*	13.4
Follow me.	57.3	28.0	66.8*	19.0
Look at this.	43.9	29.9	56.1*	25.4
Let's watch TV.	45.9	5.6	46.3*	24.0
Feed the dog.	58.6	.6	7.6	57.3*
Get me the scissors.	56.1	41.4*	20.4	47.1*
Open your book.	52.2	78.8*	7.2	19.6
Study your spelling words.	58.0	68.7*	4.4	66.2*
Read this story.	45.2	73.9*	9.5	38.2
Be quiet.	31.8	54.8*	19.0	38.2
Did you clean your room?	49.0	3.8	1.9	69.4*
Did you finish your work?	40.8	74.4*	14.5	61.8
Do you want to go to the store?	49.0	3.8	36.9	53.5*
Do you want to go to the office?	26.1	43.2*	4.3	6.2

TABLE 12

Identification of Sentences or Actions Which Function
To "Get Your Attention"
(Percent of Pupils Responding; N=155)

	In General	In School Settings	In Play Settings	In Home Settings
(Child's name)	46.4	47.0	54.8*	57.4*
Lookit.	52.5	23.0	60.3*	25.1
See what I made.	46.5	12.7	43.9*	11.4
Hey, you guys.	52.5	23.8	45.5*	12.2
Come here a minute.	57.3	39.4	61.8*	64.3*
You know what?	46.2	23.2	58.5*	26.3
What happened in school today?	43.2	1.8	19.0	69.4*
Did you hear me?	52.5	44.2	26.2	58.3*
Be quiet.	47.7	63.0*	20.3	48.4
Get out your book.	27.9	67.4*	3.1	22.3
All right.	20.3	28.5*	21.0	22.3
[Ring the bell.]	28.8	21.1*	5.7	3.2
[Turn out the lights.]	25.2	41.9*	3.7	14.8
[Raise their hand.]	19.7	18.4*	2.4	1.2

appropriately serving both the influencing and attention-getting functions in both formal and informal settings (Did you clean your room?, Did you finish your work?, You know what?, Did you hear me?). We emphasize this because it has been suggested elsewhere (specifically, in the NIE request for proposals which eventually led to the funding of this study) that teacher use of the question form to issue a directive might be one important instance of miscommunication resulting from teacher-pupil differences in perceptions of classroom discourse. It seems clear that for pupils in this study use of the question form to serve other functions (both directive and attention-getting) is a very familiar phenomenon at home and at play, as well as at school.

Our second conclusion has to do with relationships between identification of sentences for use in general vs. use in specific settings. Table 13 presents these data. (The reader is reminded that children were first asked the "general" question, "Which of these things might someone say/do to get you to do something/ get your attention?" and then asked about specific settings (Which of these things might your teacher say...?).

It appears that sentences which are perceived by pupils as functioning primarily in school settings are much less apt to be selected as serving the general function than sentences perceived as functioning primarily in home or play settings. (It is also the case that sentences seen frequently as functioning in more than one setting are selected as serving the general function slightly more often than those whose functioning is seen as largely restricted to one setting.) We interpret these results to be supportive of our general finding that pupils perceive classroom discourse as "a language apart," with rules, forms, and functions that are distinctly different from those of talking in informal social settings. The language that is appropriate to school does not come quickly to mind when children are asked about "talking" in general, even

TABLE 13

Identification of Sentences to Serve
A General Function Compared
to Prevalency of Selection in Specific Settings

Sentences that "get you to do something"

	Mean Percentage of Pupils Identifying Sentences As Serving General Function
Sentences Prevalent in Play Settings Only (N=4)	52.23
Sentences Prevalent in Home Settings Only (N=3)	52.20
Sentences Prevalent in School Settings Only (N=5)	39.22
Sentences Prevalent in Two Settings: Home & School (N=2)	57.05

Sentences that "get your attention"

	Mean Percentage of Pupils Identifying Sentences As Serving General Function
Sentences Prevalent in Play Settings Only (N=4)	49.43
Sentences Prevalent in Home Settings Only (N=2)	47.85
Sentences Prevalent in School Settings Only (N=6)	28.27
Sentences Prevalent in Two Settings: Home & Play (N=2)	51.85

through school constitutes much of the child's day.

Pupil-generated sentences: general patterns. The sentences which pupils generated themselves as examples of things which might be said to serve influencing or attention-getting functions provide us with much more variety in form-function relationship. The sentence forms that pupils generated are presented in Tables 14 and 15. Some interesting patterns stand out immediately. For example:

1) The command is reportedly the most prevalent "influencing" form used by the teacher (35.4%) but it is even more frequently attributed to the mother, (51.4%);

2) Playmates are seen as using a wider variety of forms to serve the influencing function than either mothers or teachers (Call - 13.57%, Command - 12.3%, Request - 10.3%, Question - 17.4%, Suggest - 10.3%);

3) Pupils report that they use a signal (27.9%) to influence their teachers (i.e., they get attention first), a request form to influence their mother (27.1%) and a call (19.3%), command (18.7%), or request (17.4%) to influence their playmates;

4) Teachers reportedly use the command form to get attention (25.8%) as well as to influence (35.4%), while mothers also use commands to get attention (20.6%), but are more frequently reported to use a call to serve this function (29.%); and

5) Calling ("come here a minute") is the predominant form of attention-getting at home and at play, for both children and adults, but it is reported to serve this function infrequently at school.

These tables hint at status differentials in appropriate forms (teachers command, pupils signal; mothers command, children request), but to examine this problem more fully we must make more specific comparisons of pupil responses.

Comparisons of forms within settings. The data presented in Table 16 are organized to display the responses of individual pupils in reporting both what they would say and what the other person in the setting would say to "get them/you to do something." The layout of this table is based on the assumptions that: someone lower in status than the one (s)he is addressing may have to get that person's attention before attempting to influence; someone of about equal status

TABLE 14

Forms of Pupil-Generated Sentences
Which Function to "Get You To Do Something"
(Percent of Pupils Responding in Each Category)
(N=154)

	At School Teacher	At Home Mother	At Play Friend
Physical Contact/Proximity	0	0	0
Signal	3.2	0	0
*Name	1.3	.6	1.9
Call	1.9	6.5	13.5
Command	35.4	51.3	12.3
Request	8.3	5.1	10.3
Question	1.9	2.5	17.4
Suggest	7.1	8.4	10.3
"Other"	5.8	1.3	.6
**No Response	34.8	24.0	33.5
*Name, Plus	4.3	10.9	3.8

	Self	Self	Self
Physical Contact/Proximity	.6	.6	0
Signal	27.9	0	0
*Name	3.2	3.9	5.8
Call	9.7	15.5	19.3
Command	5.8	17.4	18.7
Request	15.6	27.1	17.4
Question	3.9	13.5	9.6
Suggest	4.5	7.8	7.1
"Other"	7.1	.6	5.2
No Response	21.4	13.5	16.8
*Name, Plus	6.3	16.7	4.4

---

* Pupil responses somtimes used a name to introduce, followed by another form. These sentences are included under the "major" form category, and a special note is made under "name, plus" to indicate the frequency with which this response occurred.

** The incidence of "no response" is high here because pupils said they could think of no examples in addition to those they had already identified from the set of given sentences (Tables 11 and 12).

TABLE 15

Forms of Pupil-Generated Sentences
Which Function To "Get Attention"
(Percent of Pupils Responding in Each Category
(N=155)

	At School Teacher	At Home Mother	At Play Friend
Physical Contact/Proximity	1.3	0	3.9
Signal	7.1	1.9	.6
*Name	1.3	2.6	2.6
Call	14.2	29.0	27.7
Command	25.8	20.6	7.7
Request	3.2	2.5	3.9
Question	0	1.2	5.1
Suggest	9.0	7.7	9.7
"Other"	3.2	1.9	5.2
**No Response	34.8	32.3	35.5
*Name, Plus	8.4	12.1	19.3

	Self	Self	Self
Physical Contact/Proximity	3.2	3.2	1.9
Signal	60.0	1.9	.6
*Name	15.5	19.4	19.4
Call	8.4	43.3	46.5
Command	1.3	4.5	7.1
Request	2.6	1.2	2.6
Question	0	1.3	2.6
Suggest	3.9	13.5	5.1
"Other"	1.3	1.9	3.2
No Response	3.9	9.7	11.0
*Name, Plus	3.2	20.6	16.1

* Pupil responses somtimes used a name to introduce, followed by another form. These sentences are included under the "major" form category, and a special note is made under "name, plus" to indicate the frequency with which this response occurred.

** The incidence of "no response" is high here because pupils said they could think of no examples in addition to those they had already indentified from the set of given sentences (Tables 11 and 12).

TABLE 16

Pupil-Generated Sentences for
"Getting Someone To Do Something:"
Comparisons Within Settings

Home

Mother to Child

Child to Mother	Attention	Request/ Question/Suggest	Command	Other/ No Response
Attention	4	6	13	8
Request/ Question/ Suggest	7	15	42	11
Command	0	0	19	7
Other/ No Response	0	4	5	13

Transformed Differential Status Ratio - 57:36:7

School

Teacher to Child

Child to Teacher	Attention	Request/ Question/Suggest	Command	Other/ No Response
Attention	8	12	20	24
Request/ Question/ Suggest	1	7	18	11
Command	0	1	6	2
Other/ No Response	1	7	11	25

Transformed Differential Status Ratio - 68:29:3

Playmate to Child

Child to Playmate	Attention	Request/ Question/Suggest	Command	Other/ No Response
Attention	13	10	3	13
Request/ Question/ Suggest	4	38	5	6
Command	2	7	9	11
Other/No Response	5	4	2	23

Transformed Differential Status Ratio - 20:66:14

may use a moderate form of address such as a request, question, or suggestion in trying to influence another; and someone of higher status than the one (s)he is addressing may use a command form. When the same form of address is attributed to onself and the other person, then no status differential is implied. When a "higher" status form is abbributed to the other person and a "lower" status to oneself, or vice versa, then a status differential is implied.

To quantify the status differentials that are implied by the responses of pupils in this study, we have taken the number of responses that imply higher status, equal status, and lower status to the "other" person in comparison to oneself, and formed ratios from these numbers. For example, in the home setting, there are 61 responses that imply higher status for the mother than the child (mother commands, child requests, 42 instances; mother commands, child gets attention, 13 instances; mother requests/questions/suggests, child gets attention, 6 instances). There are 38 responses that imply equal status for both participants (both get attention, 4 instances; both request/question/suggest, 15 instances; both command, 19 instances). There are 7 responses that imply lower status for the mother than the child (mother gets attention, child requests/questions/suggests). Instances where no response (or an uncodable response) has been given are not available for analysis of forms of address used, and are not included in these calculations. The "differential status ratio" for mother to child is thus 61:38:7.

In order to compare ratios across settings, we have transformed these ratios into percentage figures (e.g., 61 + 38 + 7 = 106; 61 is 57% of 106, etc. The transformed "differential status ratio" for forms of address used to "get someone to do something" is 57:36:7 when the participants are mother and child. The ratio for teacher and child is 68:29:3. The ratio for playmate and child is 20:66:14. These comparative ratios suggest that children in this study use,

and expect others to use, forms of address that indicate approximately equal status for themselves in comparison to their playmates, and lower status for themselves in comparison to their mothers and teachers. The status differential between teacher and child is somewhat more "extreme" than the differential between mother and child.

Table 17 presents similar data for each of the three settings on the forms of address used to "get their/your attention." Here, nonverbal means of attention-getting (raising hand, standing near someone) are assumed to imply lower status than verbal forms (calling or naming someone). The differential status ratios in this instance are 38:52:10 for mother and child, 72:25:3 for teacher and child, and 24:60:16 for playmate and child. Again playmate and child reportedly use fairly similar forms of address, while the forms of address reported imply higher status for the mother and teacher than for the child. Here the status differential is much more extreme between teacher and child than between mother and child.

Differential status ratios within settings in relation to other variables. The general "rule" for appropriate forms of address as perceived by pupils in this study might be stated as follows:

> Use higher status forms when you address mother and teacher, and equal status froms when you address playmates. Expect mother and teacher to use lower status froms in addressing you, and playmates to use equal status forms.

To examine individual pupil differences in perception of this general rule, we can compare the differential status ratios implied by the forms of address generated by various pupil subgroups. These data are presented in Tables 18, 19, 20, and 21. These are descriptive data. No tests of significance have been used.

The ratios presented in Table 18 describe pupil differences in perceptions of appropriate forms of address to serve the "influencing" function in the school setting. The data suggest that Anglo children accord higher differential

TABLE 17

Pupil-Generated Sentences for
"Getting Someone's Attention:"
Comparisons Within Settings

Home

	Mother to Child				
Child to Mother	Nonverbal Attention	Verbal Attention	Request/ Question/Suggest	Command	Other/ No Response
Nonverbal Attention	1	2	0	2	3
Verbal Attention	2	39	11	16	29
Request/ Question/ Suggest/	0	6	5	5	9
Command	0	1	1	4	1
Other/ No Response	0	1	1	5	11

Transformed Differential Status Ratio-38:52:10

School

	Teacher to Child				
Child to Teacher	Nonverbal Attention	Verbal Attention	Request/ Question/Suggest	Command	Other/ No Response
Nonverbal Attention	11	15	9	26	37
Verbal Attention	2	8	4	11	12
Request/ Question/ Suggest	0	0	4	3	3
Command	0	1	0	0	1
Other/ No Response	0	0	2	0	6

Transformed Differential Status Ratio-72:25:3

TABLE 17 (continued)

Play

Child to Playmate	Playmate to Child: Nonverbal Attention	Verbal Attention	Request/ Question/Suggest	Command	Other/ No Response
Nonverbal Attention	3	0	0	0	1
Verbal Attention	3	0	0	0	1
Request/ Question/ Suggest	0	3	7	0	6
Command	0	2	5	3	2
Other/ No Response	0	1	4	1	16

Transformed Differential Status Ratio-24:60:16

TABLE 18

Differential Status Ratios
Within the School Setting:
Forms of Address for Getting Someone To Do Something
(Comparisons by Ethnicity, Reading Achievement
Classroom, and Grade Level

Differential Status Ratios, Teacher and Child, by Ethnic Background

Anglo	78:22:0
Mexican-American	61:33:6
Black and Other Minorities	69:31:0

Differential Status Ratios, Teacher and Child, By Entering Reading Achievement

Above 2nd Quartile	73:27:0
Below 2nd Quartile	68:30:0
Below 1st Quartile	64:28:8

Differential Status Ratios, Teacher and Child, By Classroom and Grade Level

Teacher A	55:45:0
Teacher B	75:25:0
Teacher C	75:25:0
Teacher D	79:14:7
Teacher E	64:27:9
Teacher F	69:31:0
Second Grade	55:45:0
Third Grade	76:21:3
Fourth Grade	67:29:4

TABLE 19

Differential Status Ratios
Within the Home and Play Settings
Forms of Address for Getting Someone to Do Something
(Comparisons by Ethnicity, Reading Achievement
and Peer Status)

Differential Status Ratios, Mother and Child, By Ethnic Background

Anglo	58:32:10
Mexican-American	58:36:6
Black and Other Minorities	58:42:0

Differential Status Ratios, Mother and Child, By Entering Reading Achievement

Above 2nd Quartile	55:30:15
Below 2nd Quartile	57:37:7
Below 1st Quartile	67:33:0

Differential Status Ratios, Playmate and Child, By Peer Status

High Peer Status	19:52:29
Middle Peer Status	16:72:12
Low Peer Status	26:61:13

TABLE 20

Differential Status Ratios Within the School Setting: Forms of Address for Getting Someone's Attention (Comparisons By Ethnicity, Reading Achievement, Classroom, and Grade Level)

Differential Status Ratios, Teacher and Child, By Ethnic Background

Anglo	74:23:3
Mexican-American	73:25:2
Black and Other Minorities	60:33:7

Differential Status Ratios, Teacher and Child, By Entering Reading Achievement

Above 2nd Quartile	71:26:3
Below 2nd Quartile	74:22:4
Below 1st Quartile	70:28:2

Differential Status Ratios, Teacher and Child, By Classroom and Grade Level

Teacher A	77:17:6
Teacher B	71:29:0
Teacher C	67:27:7
Teacher D	80:20:0
Teacher E	75:25:0
Teacher F	63:31:6
Second Grade	77:17:6
Third Grade	73:25:2
Fourth Grade	69:28:3

TABLE 21

Differential Status Ratios
Within the Home and Play Settings:
Forms of Address for Getting Someone's Attention
(Comparisons By Ethnicity, Reading Achievement,
and Peer Status)

Differential Status Ratios, Mother and Child, By Ethnic Background

Anglo	36:54:10
Mexican-American	44:47:9
Black and Other Minorities	23:62:15

Differential Status Ratios, Mother and Child, By Entering Reading Achievement

Above 2nd Quartile	42:50:8
Below 2nd Quartile	48:45:7
Below 1st Quartile	29:57:14

Differential Status Ratios, Playmate and Child, By Peer Status

High Peer Status	21:62:17
Middle Peer Status	24:35:41
Low Peer Status	35:56:9

status to the teacher than do Mexican-American children, that higher achieving children accord higher differential status to the teacher than do lower achieving children, and that third grade children accord somewhat higher differential status to the teacher than do fourth grade children (since only one second grade was included in this study, we are not sure whether these apparent differences are attributable to the grade level or the individual teacher).

Table 19 presents ratios which describe pupil differences in perceptions of appropriate forms of address for influencing others in home and play settings. These data suggest no differences among ethnic groups in the differential status accorded to the mother, but low achievers in reading appear to accord higher differential status to the mother than do high achievers in reading. It is interesting to note that children low in peer status tend to report forms of address which accord higher status to their playmates than is accorded to them by their playmates, while high peer status children reverse this pattern. It would appear that status differentials operate in forms of address used within the peer group as well as between adult and child.

Table 20 presents data on forms of address perceived as appropriate for serving the attention-getting function in the school setting. It appears that there are fewer individual pupil differences with regard to appropriate forms for this language function. Black and other minority group pupils accord less differential status to the teacher than do Anglo or Mexican-American pupils, and pupils of Teacher C and Teacher F seem to accord less differential status to the teacher than do pupils of most other teachers, but these are the only clear differences.

Pupil differences in perceptions of form-function relationships for attention-getting in home and play settings are much more marked, as is apparent from the data presented in Table 21. Mexican-American children accord somewhat

higher differential status to the mother than Anglo children, while Black and other minority group children accord less differential status than either of the other two groups. Children who are lowest in reading achievement accord much less differential status to the mother than do children in the two higher achieving groups. Children of low peer status accord higher differential status to their playmates, children of middle peer status accord higher differential status to themselves, and children of high peer status accord about equal status to themselves and their playmates.

We interpret these data somewhat cautiously since no significance tests have been used. However, the picture that emerges suggests that children in general are aware of the differential social status of participants in the various social settings with which they are most familiar, and that they can express this awareness by identifying different forms of address as appropriate, depending on the relative status of the person being addressed and the person doing the addressing. The degree of differential status expressed in the forms selected as appropriate may vary with the language function being performed. Different pupil groups may vary in their interpretation of this "rule" of discourse, and it is possible that pupils low in classroom status (e.g., low achievers in reading) or from particular cultural groups (e.g., Mexican-American) may accord less differential status to the teacher than other pupils.

Comparisons of forms across settings. To better understand the home-school discontinuties in rules of discourse that pupils must cope with, it may be useful to compare pupil perceptions of appropriate forms of address across settings. These data are presented in Tables 22 and 23, along with the implied differential status ratios.

In Table 22 we examine pupil perceptions of appropriate forms of address for influencing others. The data suggest that in addressing the child the mother

TABLE 22

Pupil-Generated Sentences for
"Getting Someone To Do Something:"
Comparisons Across Settings

	Teacher to Child			
Mother to Child	Attention	Request/ Question/Suggest	Command	Other/No Response
Attention	3	3	0	5
Request/ Question/ Suggest	2	8	8	7
Command	5	14	41	19
Other/ No Response	0	1	6	32

Transformed Differential Status Ratio - 13:62:25

	Teacher to Child			
Playmate to Child	Attention	Request/ Question/Suggest	Command	Other/No Response
Attention	4	5	9	6
Request/ Question/ Suggest	4	16	23	16
Command	2	3	12	2
Other/ No Response	0	2	11	39

Transformed Differential Status Ratio - 47:41:12

TABLE 22 (continued)

Child to Mother

Child to Teacher	Attention	Request/ Question/Suggest	Command	Other/No Response
Attention	20	33	9	2
Request/ Question/ Suggest	2	31	5	1
Command	1	0	7	1
Other/ No Response	8	11	8	17

Transformed Differential Status Ratio - 42:55:3

Child to Playmate

Child to Teacher	Attention	Request/ Question/Suggest	Command	Other/No Response
Attention	20	23	9	12
Request/ Question/ Suggest	5	20	10	2
Command	3	2	3	1
Other/ No Response	11	8	6	19

Transformed Differential Status Ratio - 44:45:11

TABLE 23

Pupil-Generated Sentences For
"Getting Someone's Attention:"
Comparisons Across Settings

Teacher to Child

Mother to Child	Nonverbal Attention	Verbal Attention	Request/ Question/Suggest	Command	Other/No Response
Nonverbal Attention	2	0	0	0	1
Verbal Attention	4	12	6	12	15
Request/Question Suggest	3	5	3	4	3
Command	2	4	6	12	8
Other/No Response	2	3	4	12	32

Transformed Differential Status Ratio - 29:39:32

Teacher to Child

Playmate to Child	Nonverbal Attention	Verbal Attention	Request/ Question/Suggest	Command	Other/No Response
Nonverbal Attention	3	0	0	3	1
Verbal Attention	6	13	6	6	16
Request/Question Suggest	3	0	8	13	5
Command	0	2	2	4	4
Other/No Response	1	9	3	14	33

Transformed Differential Status Ratio - 41:41:19

Child to Mother

Child to Teacher	Nonverbal Attention	Verbal Attention	Request Question/Suggest	Command	Other/No Response
Nonverbal Attention	6	63	14	5	10
Verbal Attention	0	28	6	0	3
Request/Question Suggest	1	4	3	1	1
Command	0	0	0	1	1
Other/No Response	1	2	2	0	3

Transformed Differential Status Ratio - 68:28:4

Child to Playmate

Child to Teacher	Nonverbal Attention	Verbal Attention	Request/ Question/Suggest	Command	Other/No Response
Nonverbal Attention	4	69	11	5	9
Verbal Attention	0	28	2	4	3
Request/Question Suggest	0	3	3	1	3
Command	0	1	0	0	1
Other/No Response	0	1	0	1	6

Transformed Differential Status Ratio - 70:27:3

is perceived as expressing higher differential status relative to the child than the teacher (13:62:25); e.g., the mother commands and the teacher requests, 14 instances; the mother requests and the teacher commands, 8 instances). The teacher expresses higher differential status relative to the child than the playmate (47:41:12). The child accords higher differential status relative to himself/herself to the teacher than to the mother (42:55:3), and higher differential status to the teacher than to the playmate (44:45:11).

In Table 23 the data on appropriate forms of address for getting attention, compared across settings, are presented. In this instance the mother and teacher are seen as quite similar in the differential status (relative to the child) that they express in their forms of address (29:39:32). The teacher still expresses higher differential status than the playmate (41:41:19) in addressing the child. The child accords much higher differential status (relative to self) to the teacher than the mother in the forms of address used for getting attention (68:28:4) than is the case for the forms of address used to influence (42:55:3). The same pattern holds in the forms of address used by the child in addressing the teacher vs. the playmate (70:27:3, getting attention; 44:45:11, getting someone to do something).

Differential status ratios across settings in relation to other variables. From the perspective of the child, the general "rule" that appears to operate for appropriate forms of address compared across settings might be stated as follows:

> Address your teacher in higher status forms (relative to yourself) than you use to address your mother or your playmate. Expect your playmate to accord you more relative status in forms of address than your teacher does, and your teacher to accord you more status than your mother does (this last holds for attempts to get your attention).

To examine pupil differences in awareness of or interpretation of this general rule, we have computed differential status ratios separately for various pupil

sub-groups, focusing on the forms of address used by the child in speaking to the teacher and the mother. These data are presented in Tables 24 and 25.

It would appear from the data in Table 24 that, in attempting to influence others, Anglo and Mexican-American pupils are quite similar in their tendency to accord higher relative differential status to their teacher than to their mother, while Black and other minority group children differentiate between the two to a much smaller degree. Pupils who are very low in entering reading achievement are less apt to accord higher differential status to the teacher vs. the mother, than are pupils who are higher achievers. Pupils of Teacher A and Teacher E do not seem to accord as much differential status to the teacher vs. the mother as do pupils in other classrooms. Third grade pupils accord greater differential status to the teacher vs. the mother than do fourth grade pupils.

In Table 25 the same organization of data is presented for the forms of address reportedly used by pupils to get someone's attention. Here we find very little variation by pupil sub-groups, except for the pupils in Teacher A's class, who accord much less status to their teacher relative to their mother than do pupils in the other classes.

Based on these data, it would appear that, for children in this study, home-school discontinuities in the forms of address appropriately used by the child are more apt to occur in relation to the attention-getting function (68:28:4 for child to teacher vs. mother) than the influencing function (42:55:3 for child to teacher vs. mother), but the discontinuities in rules for the attention getting function tend to be viewed similarly by different pupils (i.e., they do not necessarily pose an interpretation problem). Pupils low in classroom status (e.g., low in reading achievement) or from particular cultural groups (e.g., black and other minorities) may not accord as much differential status

TABLE 24

Differential Status Ratios
Across School and Home Settings:
Forms of Address Used by Child
To "Get Someone to Do Something"

Differential Status Ratios, Child to Teacher vs. Mother,
By Ethnic Background

Anglo	44:56:0
Mexican-American	46:52:2
Black and Other Minorities	25:63:12

Differential Status Ratios, Child to Teacher vs. Mother,
By Entering Reading Achievement

Above 2nd Quartile	42:53:5
Below 2nd Quartile	52:48:0
Below 1st Quartile	36:62:0

Differential Status Ratios, Child to Teacher vs. Mother,
By CLassroom and Grade Level

Teacher A	29:64:7
Teacher B	53:47:0
Teacher C	44:56:0
Teacher D	52:38:10
Teacher E	29:71:0
Teacher F	41:59:0
Second Grade	29:64:7
Third Grade	50:46:4
Fourth Grade	36:64:0

TABLE 25

Differential Status Ratios
Across School and Home Settings:
Forms of Address Used By Child
To "Get Someone's Attention"

Differential Status Ratios, Child to Teacher vs. Mother,
By Ethnic Background

Anglo	63:31:6
Mexican-American	70:27:3
Black and Other Minorities	70:30:0

Differential Status Ratio, Child to Teacher vs. Mother,
By Entering Reading Achievement

Above 2nd Quartile	68:30:2
Below 2nd Quartile	70:27:3
Below 1st Quartile	67:29:4

Differential Status Ratio, Child to Teacher vs. Mother,
By Classroom and Grade Level

Teacher A	47:53:0
Teacher B	73:23:4
Teacher C	64:27:9
Teacher D	76:20:4
Teacher E	78:17:5
Teacher F	63:33:4
Second Grade	47:53:0
Third Grade	71:23:6
Fourth Grade	69:27:4

to the teacher vs. the mother in forms of address used to influence her as other pupils. That is, they do not display as much awareness of a home-school discontinuity. This may indicate that they do not understand this "rule" of classroom discourse as well as other pupils.

Summary. In summarizing the results with regard to pupil perceptions of discourse rules for appropriate forms of address, it is important to reiterate the following findings:

1) "School talk" appears to be perceived as a language apart, for it does not come immediately to mind when pupils are asked to select sentences that serve the influencing and attention-getting functions in general;

2) A wide variety of forms, including the question form, are generated by pupils as appropriate for serving both the influencing and attention-getting functions;

3) Within each of the three settings of school, home, and play, the form of address identified as appropriate for the influencing and attention-getting functions reportedly vary according to the relative status of the speaker and the listener in that social setting;

4) There appear to be grade level, ethnic, and reading achievement level differences in the degree of differential status (teacher to child) expressed by pupils in reports of appropriate forms of address for the influencing function, and ethnic differences in the degree of differential status expressed in forms of address for the attention-getting function;

5) There appear to be reading achievement differences in differential status expressed (mother to child) in the home setting for the influencing function, and both ethnic and reading achievement differences expressed for the attention-getting function;

6) There are peer status differences expressed (playmate to child) for both influencing and attention-getting functions in the play setting;

7) There appears to be more home-school discontinuity in appropriate forms of address (child to adult) for the attention-getting function than the influencing function, but there are no clear pupil differences in perception of this "rule" (i.e., it appears to be understood and accepted by most pupils); and

8) There appear to be ethnic, reading achievement, and grade level

differences in perceptions of home-school discontinuity in forms of address appropriate for th[illegible] influencing function (child to adult), with Black and other minorities, low achievers, and fourth graders reporting the least discontinuity.

Taken together, these findings suggest that children are quite aware of the relationships between social status and appropriate forms of address in each of the settings most familiar to them, and of the very real differences between rules of discourse in school settings compared to home and play settings. Further, the findings suggest that where home-school discontinuities are very marked, they may be more completely understood (perceived as differences) by all groups of pupils, and that where individual pupil differences in perceiving home-school discontinuities exist, the pupils who do not perceive the rules as different in the two settings may be the ones who encounter achievement problems.

Teacher Perceptions of
Pupils' Communicative Behavior

Teacher perceptions of how well pupils follow the most basic rules of classroom discourse (i.e., exhibit an operational understanding of these rules) need to be considered if we are to understand more fully the part these rules play in the ongoing classroom. Teachers in this study were, therefore, asked to categorize their pupils in September, October, and December on the basis of several communication characteristics which were related to basic "rules" of classroom discourse, and which had been identified as particularly relevant to teachers in prior studies. These characteristics were: listens attentively in class; participates in class discussions; follows the talking- no talking rules of the classroom; and uses "standard English." In addition, teachers were asked to group pupils according to their probable success in reading for the year.

Teacher ratings of pupils in December, when they were thoroughly familiar with pupils, were combined to develop a composite measure for each pupil, and

within each classroom pupils were categorized as low, middle, or high in "status with teacher" on the basis of this composite score. Relationships between status with teacher and pupil perceptions of classroom discourse, or pupil participation in classroom discourse, have been discussed elsewhere in this final report (principally in Part II). Here we are concerned with examining the relationships among the various ratings, to better understand how teachers might prioritize these various characteristics, and how stable their perceptions might be over time.

Relationships among teacher perceptions of various pupil characteristics. In order to examine relationships among teacher ratings of pupils on the communication characteristics, and on predicted achievement, ratings on each possible pair of characteristics were used to set up a series of 3x3 tables. The Chi-square test was used to determine the significance of the relationship, and the contingency coefficient to determine the degree of relationship. Table 26 presents the tables comparing teacher ratings on each communication characteristic with teacher predictions of success in reading (all ratings made in December). All pairs of characteristics are significantly related, with probability levels ranging from $p < .001$ to $p < .025$. This is also the case for all pairs of communication characteristics (e.g., listening attentively compared to participating in class discussions). Illustrations of these relationships are presented in Table 27 (probability levels range from $p < .001$ to $p < .05$).

We are most interested in the degree of the relationships, however, for that measure provides evidence about the relative importance teachers place on various aspects of pupils' communicative behavior with regard to pupil learning (expected success in reading). Contingency coefficents for relationships of particular interest are presented in Table 28.

The various aspects of pupils' communicative behavior can be ranked in

TABLE 26

Teacher Perceptions of Pupils' Communicative Behavior Compared to Predicted Success in Reading

Predicted Success	Listening Attentively		
	Low	Middle	High
High	9	24	61
Middle	13	21	9
Low	12	13	5

$X^2 = 37.69; df = 4; p < .001$

Predicted Success	Participating in Disucussions		
	Low	Middle	High
High	14	27	53
Middle	15	22	8
Low	13	13	4

$X^2 = 29.98, df = 4; p < .001$

Predicted Success	Following "No Talking" Rules		
	Low	Middle	High
High	23	13	58
Middle	14	12	17
Low	10	10	10

$X^2 = 11.59, df = 4; p < .025$

Predicted Success	Using "Standard English"		
	Low	Middle	High
High	3	51	40
Middle	5	28	10
Low	13	16	1

$X^2 = 42.36; df = 4; p < .001$

TABLE 27

Teacher Perceptions of Pupil
Participation in Class Discussion
Compared to Other Language Characteristics

Listening Attentively	Participating in Discussion		
	Low	Middle	High
High	12	20	43
Middle	14	33	11
Low	14	9	11

$x^2 = 29.58$; df = 4; $p < .001$

Following "No Talking" Rule	Participating in Discussion		
	Low	Middle	High
High	23	31	31
Middle	11	12	12
Low	6	19	22

$x^2 = 13.62$; df = 4; $p < .01$

Using "Standard English"	Participating in Discussion		
	Low	Middle	High
High	4	23	25
Middle	27	32	33
Low	7	7	7

$x^2 = 10.16$; df = 4; $p < .05$

TABLE 28

Degrees of Relationship Between
Teacher Ratings of Pupils
on Various Characteristics
(contingency coefficients)

	Predictions of Success in Reading
Listening Attentively	.43
Participating in Class Discussions	.39
Following "No Talking" Rules	.25
Using Standard English	.45

	Participating in Class Discussions
Listening Attentively	.39
Following "No Talking" Rules	.27
Using Standard English	.24

terms of the strength of their relationship to teacher predictions of pupil success. Use of standard English is the most highly related, followed closely by listening attentively, and participating in class discussions, with following the "no talking" rules lagging far behind.

The relationships between pairs of language characteristics are not as strong generally as those between language characteristics and predicted success. In comparison to participation in discussion, listening attentively ranks highest in degree of relationship and use of standard English ranks lowest. It would appear, therefore, that while use of standard English is perceived by teachers in this study as a relatively important predictor of success in reading, it is not viewed as a very important factor in pupil participation in class discussions. Following the no talking rules of the classroom appears to be viewed by these teachers as a relatively unimportant factor for both reading success and participation in discussions. We suspect this would not be the case in all classrooms, but few children in these six classrooms were serious behavior problems, thus the occasional breach of the rules was not seriously disruptive of the learning process.

It is worth noting that teacher perceptions of these pupils were rather heavily weighted on the positive side. For example: 94 pupils were predicted to be successful in reading and only 30 to be unsuccessful; 75 were identified as high in attentive listening and 34 as low; 65 were categorized as high in participation and 40 as low; 85 were said to follow the no talking rules well and 47 poorly; 51 were labeled "high" in use of standard English and 21 were labeled "low". With such a preponderance of "highs" in each category, it is not surprising that pupils rated high in one characteristic tended to be rated high on others as well. In only one instance did the significant Chi-square statistic derive mainly from the tendency to rate pupils as <u>low</u> on each of two characteristics. That instance was the comparison of predicted

success to use of standard English. Thus it would appear that the significant relationships among the ratings of these teacher are associated with a "halo" effect more than with self-fulfilling prophecies about pupils who are destined to fail in school.

It may also be well to note that teacher predictions about pupil success in reading appear to have some basis in prior pupil achievement. Table 29 presents data comparing teacher predictions in December to pupil scores on achievement tests the previous October. The empty cells prevent our using a Chi-square test, but the relationship here is rather obvious.

The other type of relationship with regard to teacher ratings of pupils that is of interest to us here is relationship over time. Table 30 presents data comparing teacher predictions of pupil success in reading made in September with those made in December, as well as comparing teacher ratings of pupil participation in class discussions made on the same two occasions. Both are highly significant relationships ($p < .001$), but again we are most interested in the relative strength of the relationships. The contingency coefficient for the two ratings of probable success in reading is .53. The contingency coefficient for the two ratings of pupil participation in class discussions is .35. (Contingency coefficients for listening attentively and following the "no talking" rules are .39, and .46, respectively. Stability of perceptions of using standard English cannot be tested, since several teachers declined to rate pupils on this characteristic in September.) It would appear, then, that teacher perceptions of pupil ability are much more stable over time than their perceptions of communicative behaviors. This makes sense, since behavior is presumably more amenable to change than ability.

Relationships between teacher perceptions of pupil communicative behavior and other pupil status variables. As noted earlier, each teacher's ratings of a pupil on the various communication characteristics, and on probable

TABLE 29

Teacher Predictions of Pupil Success in Reading Compared To Pupil Scores on Standardized Tests

Predicted Success	"Entering" Reading Achievement Scores		
	Low	Middle	High
High	15	26	46
Middle	14	21	4
Low	26	0	0

TABLE 30

Teacher Ratings of Pupils Compared Over Time

Predicted Success in Reading

September	December Low	Middle	High
High	13	17	37
Middle	14	23	18
Low	19	8	7

$x^2 = 61.62$; df = 4; $p < .001$

Participation in Class Discussions

September	December Low	Middle	High
High	4	15	40
Middle	11	35	14
Low	23	8	7

$x^2 = 21.89$; df = 4; $p < .001$

success in reading, were combined to form a composite score, and this score was used as a measure of pupil status with the teacher. We turn now to examine how this composite measure was related to other pupil status variables. Regression analysis has been used for this purpose.

In one regression analysis, status with teacher is the dependent variable, and relative rank in class on entering reading achievement, peer status, and ethnic background are the independent variables. The overall regression is significant [$F = 5.98$ (5, 118), $p < .0001$, $R^2 = .20$], and both entering reading achievement and peer status contribute significantly to the explained variance (with exact p values of .0008 and .0240 respectively), but ethnic background variables do not contribute significantly.

Another regression analysis using status with teacher as the dependent variable has peer status, pupil sex, and sex by peer status interactions entered as independent variables. This regression is also significant [$F = 5.78$ (4, 115), $p < .0003$, $R^2 = .167$], and peer status contributes significantly to the explained variance ($p = .0014$), but sex does not, either separately or in interaction with peer status. (See appendix for detailed regression analysis tables).

It is not at all surprising to find that entering reading achievement helps to predict pupil status with the teacher, since teacher predictions of pupil success were apparently related to entering reading achievement, and were significantly related (albeit in varying degrees) to every other rating used to make up the composite measure of status with teacher. More important, perhaps, is the fact that "assigned" status variables such as sex and ethnicity do not predict pupil status with the teachers in this study. Stereotypes about the inabilities of minority group children, or the inappropriate behavior of boys, do not seem to be reflected in these teachers' judgments about pupils.

Most interesting of all, to us, is the relationship between status with teacher and peer status. The reader will recall that the peer status measure was a composite of pupil choices of other pupils, based on academic ability, sports ability, ability to take responsibility in an emergency, and close friendships. There is no obvious reason why this measure should be closely tied to teachers' judgments about how well pupils listen, participate, follow "no talking" rules, use standard English, and succeed (probably) in reading. We suggest that pupil "communicative competence" (i.e., ability to shift behavior to meet the demands of varying social settings) may be a factor here, and that both teacher judgments and peer judgments reflect to some degree this type of pupil adaptability.

Finally, we note that pupil status with the teacher is related to final reading achievement. A regression analysis with Fall '79 reading achievement as the dependent variable, and Fall '78 reading achievement, peer status, status with teacher, and ethnicity as independent variables, is significant [$F = 44.99$ (5, 96), $p < .0001$, $R^2 = 70$]. Not surprisingly, entering reading achievement contributes significantly to the explained variance ($p < .0001$). Status with teacher also contributes significantly ($p < .0001$), when entered as the last variable in the equation, but peer status and ethnic background do not.

Relationships between teacher perceptions of pupil communicative behavior and pupil perceptions of participation in classroom discourse. Details of the relationships between pupil status with teacher and the classroom discourse variables of pupil perceptions and pupil participation have been reported elsewhere in this final report. They are reviewed briefly here. As noted earlier in this segment of the final report, pupil-teacher correspondence on the stated "rules" of classroom discourse did not appear to be related to teacher perceptions of pupils' communicative behavior. But pupil perceptions of the

functions of language in classrooms were somewhat related to teacher perceptions of pupils' communicative behavior (see Part II of final report). Status with teacher as a separate variable was not significantly related to pupil perceptions of the function of classroom questions, but composite concurrent status (a combined measure reflecting status with teacher, status with peers, and entering reading achievement) was significantly related ($p < .025$). Pupils low in composite status defined teacher questions as serving an instructional function less frequently, and could give no codable function for questions more frequently than expected by chance. Status with teacher was significantly related to pupil perceptions of the functions of teacher praise ($p < .005$). Low status pupils tended not to define praise as deserved, while high status pupils frequently defined praise as deserved. Thus, it would appear that there is at least a limited relationship between teacher perceptions of pupils' communicative behavior and pupil perceptions of the functions of classroom language.

Much more marked was the relationship between teacher perceptions of pupil communicative behavior and pupils' observed participation in class discussions (see Part II of final report). A Chi-square test showed these two variables to be significantly related ($p < .025$), with low status pupils tending to be low participators and high status pupils tending to be high participators. (It is not clear from the data gathered whether high status pupils volunteered more in discussions, or were simply called on more frequently by teachers. This is a critical question which needs to be examined further.)

Summary. The major findings with regard to teacher perceptions of pupils' communicative behavior can be summarized as follows:

1. Teacher perceptions of pupils with regard to various aspects of communicative behavior, and teacher predictions of pupil success in reading are all significantly related, with varying degrees of relationship;

2. Teacher perceptions of pupils are fairly stable over time, with predictions of success showing a higher degree of relationship over time than ratings of various communicative behaviors;

3. A composite measure of teacher perceptions (pupil status with teacher) is significantly related to peer status, entering reading achievement, and final reading achievement (entering reading controlled for) of pupils, but is not significantly related to pupil sex or ethnic background; and

4. The composite measure of teacher perceptions does not appear to be related to pupil-teacher correspondence in stating the formal rules of classroom discourse, but it is significantly related to pupil perceptions of the functions of teacher praise, and to actual pupil participation in class discussions.

Taken together, these findings suggest that teacher perceptions of pupils are to some degree reality-based, i.e., they are related to other measures of "social success" and academic ability, and teacher perceptions of behavior are apparently more amenable to change than their perceptions of pupil ability. The fact that teacher perceptions are related significantly to both participation in class discussions and final reading achievement is certainly important, but it is not clear from these data just how that relationship works.

One possibility is that teacher perceptions are "accurate" and that the pupils they regard highly possess qualities which make them more active participants in the learning process, and more effective learners. Another possibility is that teacher perceptions operate to influence teachers to call more often on pupils they regard highly, and perhaps encourage them more in other ways, which may result in their having more opportunity to learn than other pupils. In order to pursue this question further, we turn now to examine relationships between pupil status, pupil participation in class discussions, and pupil success in school.

Status, Participation, and Success

The relationships among pupil status variables, and between pupil status variables and participation in class discussions and/or final reading achievement are rather complex, but very interesting. To begin with, all three of

the "concurrent," or acquired status variables (entering reading, peer status, status with teacher) are interrelated, but there are few relationships between "assigned" status (sex, ethnicity) and acquired status. We have already reported on the regression analyses indicating that both peer status and entering reading achievement contributed significantly to the explained variance in pupil status with teacher, while neither pupil sex nor ethnic background made a significant difference. Another regression analysis used peer status as the dependent variable, and entering reading achievement, status with teacher, ethnicity, and sex as dependent variables. This regression was significant [$F = 5.14\ (5, 118)$, $p < .0003$, $R^2 = .18$], and both entering reading achievement and status with teacher contributed significantly to the explained variance (exact p values of .0049 and .0004, respectively), but neither sex nor ethnicity did. Thus, entering reading contributes to the variance in both peer status and status with teacher, and peer status and status with teacher each contribute to the variance in the other.

Neither sex nor ethnicity contribute to the variance in either peer status or status with the teacher. Pupil sex is not related to entering reading achievement (see Table 31), but ethnicity is ($p < .05$). Table 32 shows that Mexican-American pupils score below the first quartile in reading achievement, and Anglo pupils score above the second quartile, much more frequently than would be expected by chance.

Pupil status variables are related to pupil participation in class discussions in interesting ways. These data are presented in Tables 33-38. We noted in the last section of this report that status with teacher is related to participation in discussion ($p < .025$), and these data are presented in Table 33. Peer status is not significantly related to classroom participation (see Table 34), but entering reading achievement is ($p < .025$). Table 35 shows that pupils high in entering reading achievement tend to be high par-

TABLE 31

Distribution of Subjects According to
Sex and Entering Reading Achievement

	Male	Female
Above 2nd Quartile	23	26
Below 2nd Quartile	22	26
Below 1st Quartile	28	28

TABLE 32

Distribution of Subjects According to
Ethnic Background and Entering Reading Achievement

	Anglo	Mexican-American	Black or Other Minority
Above 2nd Quartile	22	15	12
Below 2nd Quartile	18	21	10
Below 1st Quartile	14	34	8

$x^2 = 9.75$; df = 4; $p < .05$

TABLE 33

Pupil Participation in Class Discussion
Compared to Status with Teacher

	Low Status	Middle Status	High Status
High Participation	11	14	26
Middle Participation	19	17	12
Low Participation	23	16	12

$x^2 = 12.09$; df=4; $p < .025$

TABLE 34

Pupil Participation in Class Discussion
Compared to Peer Status

	Low Status	Middle Status	High Status
High Participation	12	13	16
Middle Participation	14	17	15
Low Participation	20	16	10

TABLE 35

Pupil Participation in Class Discussions
Compared to Entering Reading Achievement

	Below First Quartile	Below Second Quartile	Above Second Quartile
High Participation	9	17	25
Middle Participation	21	16	12
Low Participation	25	14	15

$x^2 = 12.96$; df=4; $p < .025$

TABLE 36

Ethnic Patterns in Pupil Participation
in Class Discussions

	Anglo	Mexican-American	Black or Other Minority
High Participation	25	19	10
Middle Participation	17	27	10
Low Participation	15	27	13

TABLE 37

Patterns of Pupil Participation
in Class Discussions
Compared to Sex of Pupil

	Male	Female
High Participation	27	25
Middle Participation	33	20
Low Participation	18	37

$x^2 = 9.79$; df = 2; $p < .01$

TABLE 38

Patterns of Participation
in Class Discussions
for Girls and Boys
High in Entering Reading Achievement

	High Achieving Boys	High Achieving Girls
High Participation	12	11
Middle Participation	8	4
Low Participation	3	12

$x^2 = 6.49$; df=2; $p < .05$

ticipators, while pupils low in entering reading tend to be low participators. Ethnicity is not related to participation in class discussion (see Table 36), but pupil sex is ($p < .01$). Table 37 indicates that girls are low participators more often, and boys are low participators less often, than would be expected by chance.

Thus, two of the three acquired classroom status variables (peer status and status with teacher), and one of the two assigned status variables (sex) are related to participation in class discussions. In addition, there is an interaction between sex and reading achievement, relative to class participation, such that girls who are high in entering reading are low participants much more often than boys who are high in entering reading ($p < .05$). These data are presented in Table 38.

Participation in class discussion is directly related to final reading achievement of pupils, with entering reading achievement controlled for. A regression analysis using Fall '79 reading achievement as the dependent variable, and Fall '78 reading achievement, participation in class discussion, and "information load" (a measure of the amount of linguistic information pupils reported hearing after videotape playbacks of lessons in which they were involved) as independent variables, was significant [$F=60.79$ (3, 103), $p < .0001$, $R^2 = .64$]. As would be expected, entering reading achievement contributed significantly to the explained variance ($p < .0001$). Frequency of participation in class disucssion also contributed significantly to the explained variance ($p < .0001$), when considered as the final variable entered into the equation.

Thus, we have demonstrated relationships among pupil status variables, between pupil status variables and participation in class discussion, and between participation in class discussion and final reading achievement. We turn finally to examine relationships between pupil status variables and

final reading achievement.

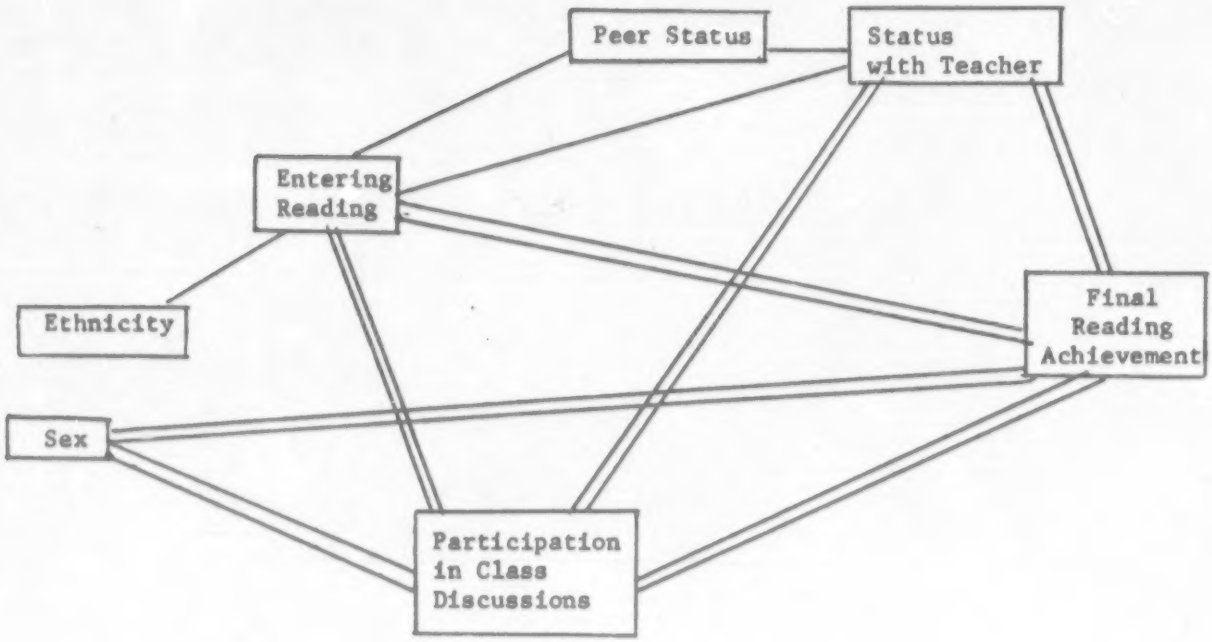
In describing the findings on teacher perceptions of pupils we have already reported a regression analysis showing that entering reading achievement and status with teacher each contributed significantly to the explained variance in final reading achievement, while peer status and ethnic background did not. Another regression analysis used Fall '79 reading achievement as the dependent variable, and Fall '78 reading achievement, pupil sex, ethnicity, and the interaction of sex and ethnicity as independent variables. The regression was significant [$F=29.31$ (6, 120), $p<.0001$, $R^2=.59$], and both entering reading achievement and sex contributed significantly to the explained variance ($p=.0001$ and $p=.0118$, respectively), but ethnicity and ethnicity X sex did not.

Thus, the data show that pupils in this study achieved more in reading if they were high in entering reading, if they were high in status with the teacher (entering reading controlled for), and if they were males (entering reading controlled for). Pupils high in peer status did not achieve more than other pupils. Pupils of Mexican-American background, though they entered with lower reading achievement, did not have significantly lower final reading achievement than other pupils, after entering reading was controlled for, though this variable did approach significance ($p<.055$).

Putting relationships together. The complex relationships among pupil status variables, participation in class discussions, and final reading achievement are diagrammed in Figure 3. Three triangular relationships stand out to us, and we have highlighted them with double lines. Sex, status with teacher, and entering reading are each related significantly to both participation in discussions and final reading achievement, while participation in discussions and final reading achievement are related to each other. We have to question, therefore, whether class participation in and of itself contributes to final

FIGURE 3

Significant Relationships Among
Pupil Status Variables, Pupil Participation
in Class Discussions, and Pupil Achievement



reading achievement, or whether its apparent contribution results from its relationship to pupil status factors which are in turn related to final achievement. We must also ask whether entering reading and status with teacher contribute independently to participation in class discussion, since they are themselves related.

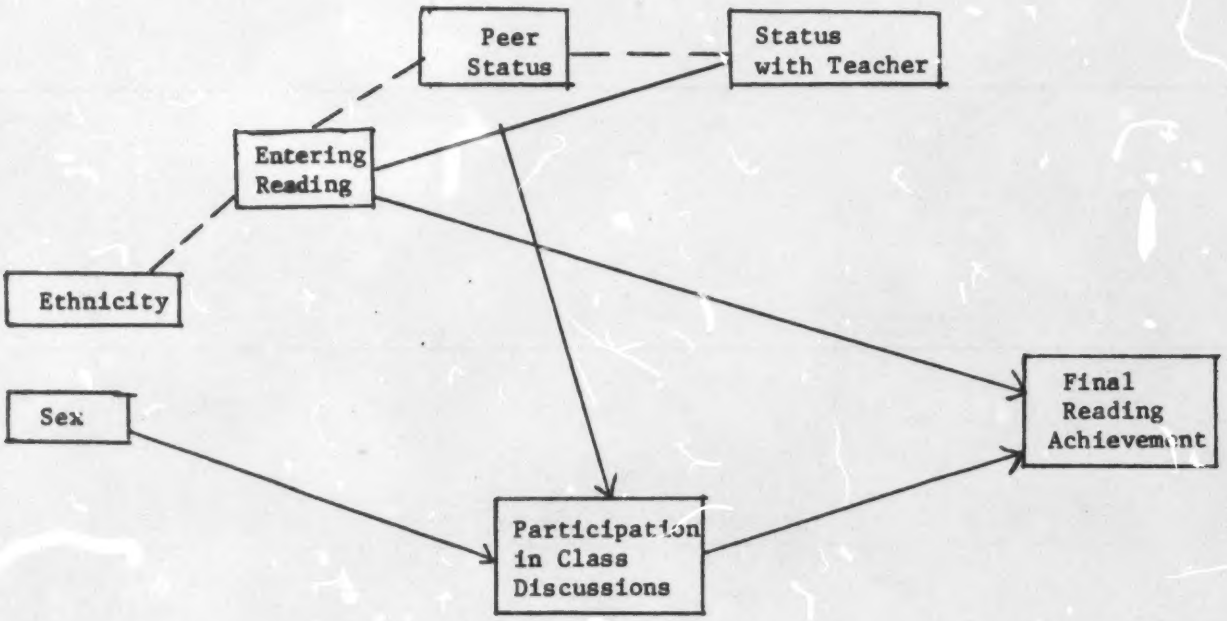
Two separate regression analyses help to answer these questions. In one, participation in class discussions is the dependent variable, and entering reading, pupil sex, and status with teacher are the dependent variables. The regression is significant [$F=5.68$ (3, 129), $p<.0012$, $R^2=.12$], and pupil sex contributes significantly to the explained variance ($p=.0074$). Neither entering reading nor status with teacher contribute significantly to the explained variance, as separate variables, although status with teacher approaches significance ($p=.0678$).

In the other regression analysis, Fall '79 reading achievement is the dependent variable, and entering reading, pupil sex, status with teacher, and participation in class discussion are the independent variables. This regression is also significant [$F=34.50$ (4, 103), $p<.0001$; $R^2=.57$], and entering reading and participation in discussion each contribute significantly to the explained variance ($p=.0001$ and $p=.0027$, respectively). Neither pupil sex nor status with teacher contributes significantly to the explained variance in this instance.

These relationships are diagrammed in Figure 4. It would appear from these data that, for pupils in this study, pupil sex contributes directly to participation in class discussions, but only indirectly (through its relationship to class participation) to final reading achievement. Status with teacher does not contribute independently to either class participation or final achievement. It appears to contribute to class participation somewhat indirectly, i.e., <u>jointly</u> with entering reading achievement. Entering reading

FIGURE 4

Chaining of Relationships
Among Pupil Status Variables,
Pupil Participation in Class Discussions,
and Pupil Achievement



achievement contributes directly to final reading achievement, but only indirectly (through its relationship to status with teacher) to class participation. Entering reading achievement is the only status variable which contributes both directly and indirectly to final reading achievement.

Given this configuration of variables, we can return to reexamine the question we asked at the end of the last section of this report: How does (might) the relationship between teacher perceptions of pupils, pupil participation in class discussions, and final reading achievement "work?" Another way of stating this is: How important or critical are teacher perceptions of pupils in relation to pupil performance?

We reiterate first that status with teacher appears to operate indirectly in relation to both participation in class discussion (through its joint contribution with entering reading achievement) and final reading achievement (through its contribution to participation in class discussion). Status with teacher does, therefore, make a contribution to pupil performance. It does not appear to be the critical factor that many teacher expectation studies may lead us to believe, however, at least not for the teachers and pupils in this study.

We note, for example, that males are no higher in status with teacher, but this fact does not prevent them from being higher participants in class discussion and higher achievers in final reading. On the other hand, pupils high in peer status tend to be high in status with teacher as well, but this fact does not insure that they are more frequent participators in class discussions or higher achievers in final reading.

We might suspect at first glance that if ethnicity were related to status with teacher as well as entering reading achievement, there would probably be a direct significant relationship between ethnicity and final reading achievement. But we must observe that peer status is related to both entering

reading and status with teacher, yet is not related to either class participation or final reading achievement (directly or indirectly).

We must conclude on the basis of these data, that for these teachers and pupils the critical variables (among those studied here) in relation to final reading achievement are entering reading and participation in class discussions. The variable of status with teacher adds "power" to entering reading achievement for purposes of predicting who will participate in class discussions, and is therefore an important variable, but it is clearly not the most important, and indeed, appears to be less "powerful" than pupil sex as a predictor of pupil performance.

In relation to our investigative interest in pupil perceptions of the rules of classroom discourse, pupil participation in class discussion can be viewed as the behavioral evidence of pupil understanding of the rules of discourse. We propose that further investigation of the interactions among the several types of pupil status variables, the behavioral manifestation of pupil understanding of the rules of classroom discourse (i.e., participation in class discussions) and final reading achievement is imperative, in order to identify the types of configurations that may exist in other school settings.

INTERPRETATIONS

To date we have reported in some detail the findings with regard to: pupil and teacher perceptions of the stated rules of classroom discourse; pupil perceptions of the stated rules of discourse in home and play settings, and of appropriate forms of address in home, school, and play settings; teacher perceptions of pupil communicative behavior and probable success in reading; and patterns of relationships among various pupil status variables, pupil behavior related to the rules of classroom discourse (participation

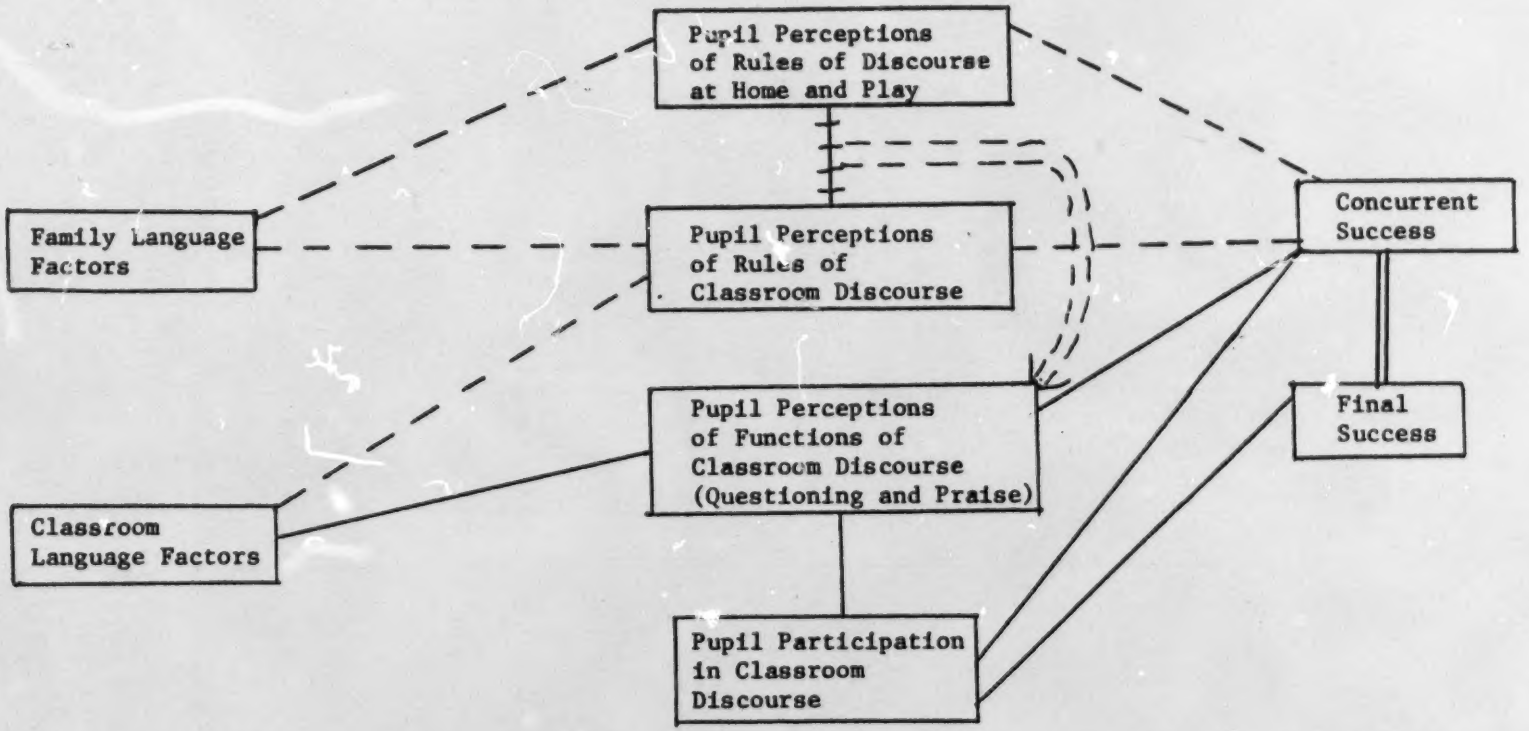
in class discussions), and final reading achievement. It is time now to try to integrate these findings into some comprehensible whole.

To aid in this task, we return to the paradigm presented in the introductory section, which has been used to guide analysis of data in this study. Based on the findings reported here we have expanded the detail in this model slightly. Figure 5 presents the revised model and indicates the relationships among variables that have been reported upon in this segment of the final report. The segmented lines indicate descriptive data pertaining to appropriate forms of address. In these instances no tests of significance have been made, but the evidence strongly suggests that differences may exist. The "laddered" line indicates findings of discontinuity between pupil perceptions of the rules of discourse at school and the rules of discourse in home and play settings. The double segmented lines moving from the "laddered" line, and pointing to "pupil perceptions of functions of classroom discourse," represent our view (noted earlier) that certain types of home-school discontinuity point to certain areas of classroom discourse for which home-school discontinuity may be potentially more detrimental to pupils. In this case the area of potential "danger" identified was classroom questioning. The solid lines in this diagram represent findings of statistically significant relationships between variables, with the double lines denoting that the only "concurrent success" variable which contributes directly (independently) to the explained variance in final reading achievement is entering reading achievement. With Figure 5 to guide us, we will discuss this integration of findings in a bit more detail.

Our investigation of pupil perceptions of appropriate forms of address in school, home, and play settings for the attention-getting and influencing functions, demonstrated quite clearly that pupils in this study in general are aware of differences among the three settings, and of status differences

FIGURE 5

Reported Relationships Among the Major Variables
Under Investigation in This Study


Pupil Perceptions of Rules of Discourse at Home and Play
Family Language Factors
Pupil Perceptions of Rules of Classroom Discourse
Concurrent Success
Pupil Perceptions of Functions of Classroom Discourse (Questioning and Praise)
Final Success
Classroom Language Factors
Pupil Participation in Classroom Discourse

between participants in each of the three settings, and that they can express these differences in the forms of address that they use. The greatest home-school discontinuity appears to occur in the forms of address deemed appropriate for the attention-getting function, but this discontinuity appears to be "clear" to pupils, since there are few individual pupil differences in the forms of address reported (or in the differential status ratios implied by these forms of address). Home-school discontinuities in forms of address considered appropriate for the influencing function are less extreme than for the attention-getting function, but there appear to be more individual pupil differences in perceptions of these discontinuities. While no tests of significance were made based on the "differential status ratios" that we developed in order to interpret these data, a careful examination of these ratios suggests that there may be grade level, ethnic and entering reading achievement level differences in pupil perceptions of appropriate forms for influencing teachers vs mothers.

In particular, we note the fact that pupils low in entering reading achievement appear to differ from other pupils in that they: accord less differential status to their teacher in forms of address reported to serve the influencing function; accord more differential status to their mothers in forms of address for influencing, and less differential status to their mother in forms of address for attention-getting; and exhibit less home-school discontinuity in forms of address reportedly used for influencing adults. We cannot help being struck by the fact that these low achievers in reading appear to accord less status to their teachers than to other pupils, since it would appear, given the reported relationships among entering reading and pupil status with teacher, that their teachers accord less status to <u>them</u> than they do to other pupils.

To return to the main topic under discussion, however, these findings

suggest that extreme discontinuities between rules of discourse in home and school settings may be more widely understood by pupils, and thus less indicative of potential problem areas, than more moderate discontinuities. Furthermore, these findings point to the importance of status differences in the classroom setting - not just the status differences between teacher and pupil, but also the status differences between pupils.

Our investigation of pupil and teacher perceptions of the rules of classroom discourse shows no significant relationship between pupil - teacher correspondence with regard to formal statements of these rules and teacher perceptions of pupil communicative behavior (pupil status with teacher). Pupil - teacher correspondence is highest for "raise your hand" rules (i.e., attention-getting), and lowest for rules associated with asking questions. There are clear differences in pupil perceptions of the rules of discourse that operate at school in comparison to home and play settings. Pupil differences in home-school congruency in the stated rules of discourse are not related to ethnic background, entering reading achievement, or classroom teacher.

Home-school congruency in stated rules of discourse is highest for rules associated with "talking and no-talking," and lowest for rules associated with getting assistance or priase, and for answering questions when you know the answer. (Note that two of these are "raise your hand" or attention-getting rules.) There is fairly high pupil agreement on what the discrepancies are (i.e., what the "rules" are in each setting) for this latter set of rules, and it would appear that these well-marked discontinuities are not apt to create problems in pupil interpretations of classroom discourse that might lead to differences in pupil performance. Lack of home-school congruency appears to be most apt to be potentially detrimental to pupil performance in areas where pupil expectations are mixed, or "muddled," i.e., differences

exist between home and school, but pupils do not agree strongly on what the differences are. This appears to be the case for rules associated with classroom questioning, at least for pupils in our study.

The major concepts resulting from our findings with regard to pupil perceptions of the rules of classroom discourse, then, are:

1) that extreme discontinuities between home and school are less apt to lead to problems in pupil interpretations of classroom discourse than are moderate discontinuities (suggested by findings both with regard to stated rules and appropriate forms of address); and

2) that an aspect of classroom discourse which is potentially "dangerous," i.e., which appears apt to present problems for pupils in interpretation of rules of discourse, is the area of classroom questioning (suggested by findings of low pupil-teacher correspondence and "muddled" home - school congruency).

These concepts serve to focus our attention on findings about classroom questioning reported in an earlier segment of this final report (Part II). Briefly, these findings indicate that:

1) Differences in teacher use of classroom questions and of praise are reflected in pupil perceptions of the functions of questions and praise (e.g., when a teacher asks questions because she really wants to know something, pupils define questions as serving an informative function);

2) Pupils who are low in "composite concurrent status" (i.e., tend to be low on all three variables of entering reading, peer status, and status with teacher) are less able to identify a function (any function) for classroom questions than other pupils;

3) Pupils who are high in reading achievement or high in status with the teacher, or high in peer status (each variable is significantly related in and of itself) are more apt to perceive teacher praise as "deserved" than are other pupils;

4) Pupils who define classroom questions as serving informational functions (i.e., operating as they might in normal conversations) are more apt to participate in class discussions than pupils who define them as serving instructional functions (i.e., "to teach or tell"); and

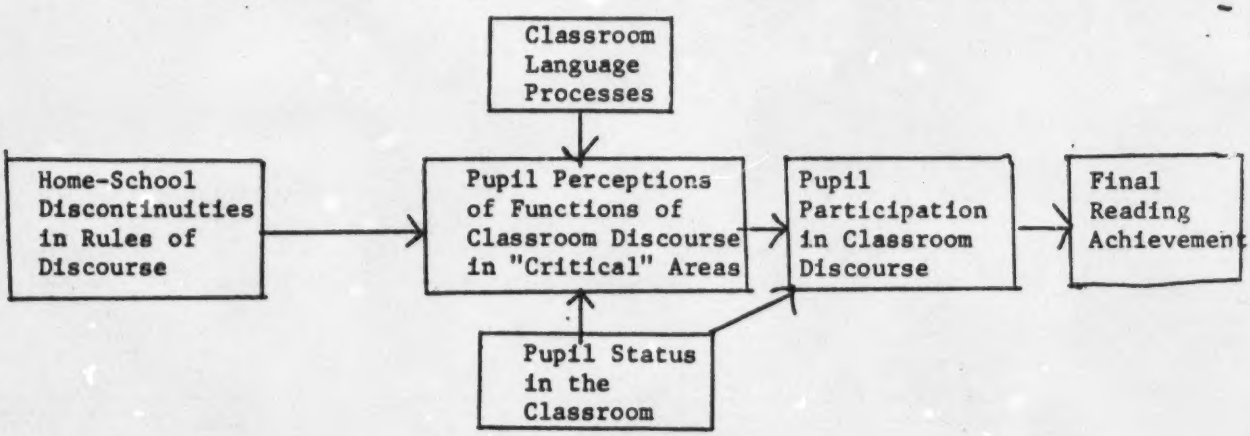
5) Pupils who perceive the teacher praise that follows pupil responses to classroom questions as "deserved" are more apt to participate in class discussions than other pupils.

These findings suggest that in the potentially critical discourse area of classroom questioning, both classroom language factors and pupil acquired

status variables may operate to influence pupil perceptions of the functions of teacher questions and teacher praise, and that these perceptions in turn may operate to influence pupil behavior (i.e., the acting out of the rules of discourse through participation in class discussions).

In the last section we examined in detail the relationships among "concurrent success" variables, pupil participation in class discussions, and final reading achievement, and concluded that the findings of this study point to the critical importance of participation in class discussions in relation to final reading achievement. It seems unneccessary to repeat that argument here. We merely reiterate that: pupil sex contributes to participation in class discussion, and thereby to final reading achievement; entering reading and status with teacher contribute jointly (but not separately) to participation in class discussion, and thereby to final reading achievement; and entering reading achievement contributes directly to final reading achievement.

Taken together, these findings suggest that we would be well-advised to search for <u>indirect</u> relationships between home-school discontinuities in the rules of discourse and pupil success in school. From the data presented here, the chain of relationships to be investigated would appear to be:


Classroom Language Processes
Home-School Discontinuities in Rules of Discourse
Pupil Perceptions of Functions of Classroom Discourse in "Critical" Areas
Pupil Participation in Classroom Discourse
Final Reading Achievement
Pupil Status in the Classroom

It is important to note that the relationships among variables that have

been identified in this study are not generalizable, since they are based only on data from pupils and teachers in six classrooms in a single elementary school. However, the purpose of any in-depth, small sample, descriptive study is primarily to generate concepts and hypotheses for further investigation. We submit that this purpose has been achieved in this study, and that important questions for future research on teaching have been identified. We earnestly hope that they can and will be pursued.

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APPENDICES

I. Data Collection Tasks

A. Open-Ended Rules of Classroom Discourse Task (September)

Suppose that a new boy (or girl) came into your class. What could you tell them about how kids talk in your classroom? I mean things like when do kids talk, and what kinds of things do they say? (write down response.)

What else could you tell them about how kids talk in your class? or What else could you tell them about when kids talk in your class? or What else could you tell them about what kinds of things kids say in your class? (write down all responses.)

What could you tell this new boy (girl) about how the teacher talks in your class? When does she talk, or what kinds of things does she say? (Write down all responses.)

B. Sentence Completion Task-School (December)

Now I'm going to read you some sentences that aren't finished. I want you to finish each sentence for me so that it will tell how people talk in your classroom. [Use teacher's name throughout, where it says "the teacher."]

1. When the teacher wants us to get quiet, she _____
_____.
2. When I want to ask the teacher something, I _____
_____.
3. If I know the answer to a question, I _____
_____.
4. If I don't know the answer to a question, I _____
_____.
5. If I need help, I _____
_____.
6. I talk quietly when _____
_____.
7. When the teacher talks, I _____
_____.
8. I don't talk when _____
_____.
9. The teacher doesn't talk when _____
_____.
10. At recess, I talk to _____
_____.
11. When I finish my work, I talk to _____
_____.

12. During a lesson, I talk to _____
_____.

13. I ask a question when _____
_____.

14. The teacher asks a question when _____
_____.

15. Before we begin to work, the teacher says _____
_____.

16. After we finish our work, the teacher says _____
_____.

17. The teacher says "good" when _____
_____.

C. Sentence Completion Task-Home (May)

Now I'm going to read you some sentences about talking at home. These sentences aren't finished. I want you to finish the sentences, so they'll tell me about how you talk at home.

1. When my mother wants me to get quiet she _____
_____.

2. When I want to ask my mother something I _____
_____.

3. If I know the answer to a question my mother asks me, I _____
_____.

4. If I don't know the answer to a question my mother asks me, I _____
_____.

5. If I need help at home, I _____
_____.

6. I talk quietly at home when _____
_____.

7. When my mother talks, I _____
_____.

8. I don't talk at home when _____
_____.

9. My mother doesn't talk when _____
_____.

10. When I'm playing at home, I talk to _____
_____.

11. When I'm doing some work at home, I talk to _____
_____.

12. When I finish my work at home, I talk to _____
_____.

13. I ask my mother a question when _____
_____.

14. My mother asks me a question when _____
_____.

15. Before I begin to do work at home, my mother says _____
_____.

16. After I finish my work at home, my mother says _____
_____.

17. My mother says "good" when _____
_____.

D. Sentence Completion Task-Play (May)

Here are a few more sentences for you to finish. Finish these sentences so that they'll tell me about how you talk when you're playing with your friends. [Use friend's name throughout, where it says "my friend".]

1. When my friend wants me to get quiet, he/she _____
_____.

2. When I want to ask my friend something, I _____
_____.

3. If I know the answer to a question my friend asks me, I _____
_____.

4. If I don't know the answer to a question my friend asks me, I _____
_____.

5. When my friend talks, I _____
_____.

6. If I'm playing with my friend, I talk quietly when _____
_____.

7. If I'm playing with my friend, I don't talk when _____
_____.

8. My friend doesn't talk when _____
_____.

9. I ask my friend a question when _____
_____.

10. My friend asks me a question when _____
_____.

11. Before we begin to play, my friend says _____
_____.

12. After we finish playing, my friend says _____
_____.

13. My friend says "good" when _____
_____.

E. Appropriate Forms of Discourse Task (May)

[Two sets of 3 x 5 cards were prepared, using comments heard on several of the videotapes used over the year. One set focused on comments that might be used to "get attention" and the other on commands, or comments that might function to "get you to do something". The sets contained examples, as follows...]

Getting Your Attention - Set	Getting You to do Something - Set
[Ring the bell.]	Open your book.
[Turn out the lights.]	Feed the dog.
[Raise their hand.]	Get me the scissors.
See what I made.	Throw me the ball.
What happened in school today?	Did you clean your room?
Hey, you guys.	Did you finish your work?
Be quiet.	Let's watch T.V.
All right.	Follow me.
Come here a minute.	Do you want to go to the store?
Get out your book.	Do you want to go to the office?
Did you hear me?	Study your spelling words.
You know what?	Read this story.
Lookit.	Look at this.
(Child's name)	Be quiet.

[The "getting attention" set was laid out in front of the pupil in random order, and the following questions were asked.]

Here are some cards of things that I've heard people saying on some of the different videotapes we've watched this year. Which of these things do you think someone might say to you if they wanted to get your attention, or get you to listen to them? (Record response, and replace the cards.)

Which of these might be said to you at home by your mother or father, if they wanted to get your attention? How often do your mother and father say these kinds of things?

Do you ever say or do things like this when you want to get your mother or father's attention? What do you say or do? (Replace cards in set.)

Which of these might be said to you in school by your teacher, if she wanted to get your attention? [continue as above] (replace cards in set.)

Which of these might be said to you by your friend while you're playing together, if he/she wanted to get your attention? [continue as above]

(Put away the "getting attention" set. Lay out the "getting you to do something" set in random order, and follow the same general procedure.)

F. Pupil Status with Teacher

In September, October, and December, each teacher was presented with a set of 3x5 cards, each card containing the name of a pupil in the class, and asked: "On the basis of what you've observed so far, can you group these pupils according to their similarities and differences in listening attentively in class?" When pupils had been grouped, the teacher was asked for each group: "How are the pupils in this group similar?" The same procedure was repeated for each of the following aspects of communicative behavior: participation in classroom discussion; observance of "no talking" rules, and use of standard English. The teacher was then asked: "Can you think of some other aspect of pupils' use of language in the classroom that you might use to differentiate and group pupils?" Finally, the teacher was asked: "Can you group pupils according to your predictions for their success in reading this year? Which pupils do you think will be the most successful and the least successful?"

Teacher responses in the December interview, when pupils were known, were used to compile a composite rating, and pupils were ranked on the basis of this overall rating, to identify status with teacher.

G. Pupil Status with Peers

1. Procedures for administering status perception instrument

a) Children will be interviewed individually.
When children enter Language Lab they should sit with an interviewer familiar to them, if possible.

b) To introduce SPI tell child we want to learn more about their class and will be asking some questions they will answer by choosing people from the picture board. Show the child the picture board. Ask if the pictures are from their class. Have the child find his/her picture and point to it.

c) Ask questions in the order they appear on the forms. Have the children point to pictures as they answer. Use the exact wording. If child gives a name, check it with the back of picture. Write down both first and last name in space provided. Record in the order given.

2. Questions Asked of Pupils

a) Suppose there is going to be a sports contest between your class and Mrs. _____'s class.

abc Which three people would you choose to make sure your class would win?

def Which three people would have to work hardest in order to be on the team?

b) Suppose your class got a chance to be on a TV Quiz Show playing against _____ grade from another school. Your class has to send a team of three people and they will be asked questions about things learned in school.

abc	Which three people would you choose to be your class team in order for your class to win?	def	Which three people would have to study hardest if they wanted to make the team?

c) Suppose your teacher had to leave the classroom.

abc	Who would she most likely leave in charge? (if absent, who? Repeat).	def	Who would she least likely leave in charge? Who else? Who else?

d) Suppose an accident happened in your class and no grown-up was around?

abc	Which person would most likely take charge and know what to do? (If absent, who? Repeat).	def	Which person would be least likely to take charge and know what to do in an emergency?

e) Suppose your teacher had an important message to send to the office.

abc	Who would she most likely choose to take the message? (If absent, who? Repeat).	def	Who would the teacher least likely choose to take the message? Who else? Who else?

f) Suppose my job was to follow you around for a week and make a list of the people in your class you were hanging around with.

abc	Who would most likely be at the top of the list. Who next? Who next?	def	Who would least likely be on the list? Who else? Who else?

g) Suppose a photographer came around and he wanted the photograph of some kids on the cover of a book for children. The photographer doesn't know any of the kids. He just walks around for a while. He opens the door of your class, pokes his head in, and looks at the children in the class for just a minute and then closes the door. If we had to decide right then,

abc	Who would he most likely chose to photograph for the book cover? Who else? Who else?	def	Who would he least likely choose to photograph for the book cover? Who else?

3. In identifying pupil status with peers, only responses to questions a, b, d, and f were used. A composite rating reflecting all choices and rejections was computed, and pupils were ranked with their class on the basis of this figure.

II. Category Systems

A. Categories for Coding Sentence Completion Task

1. Being Quiet

When _____ wants me to be quiet, (s)he....

1- signals (rings bell)
2- requests (Please quiet down.)
3- commands-moderate (Be quiet)
4- commands-sharp (Shut up!)
5- commands-extreme (screams)
6- No Response

When _____ talks, I...

1- listen
2- be quiet
3- converse
4- No Response

I don't talk when....

1- someone (general) is talking to me
2- someone specific is talking to me
3- someone is talking to someone else (3rd party)
4- other "quiet" rule (the baby's sleeping)
5- other non-rule reason (I'm watching T.V.)
6- No Response

_____doesn't talk when....

1- we (general) are talking
2- I (specific) am talking
3- a 3rd party is talking (e.g., the principal, my father)
4- other "quiet" rule (we're working)
5- other non-rule reason (we're out at recess)

2. Questions and Answers

If I know the answer to a Q., I...

1- signal for attention (raise my hand)
2- [empty set-hold to maintain parallel categories]
3- acknowledge the fact (say, I know)
4- make evaluation of own ability, or difficulty of question
5- give answer
6- don't acknowledge knowing (just sit there)
7- No Response

If I don't know the answer to a Q., I...

1- signal for attention (raise my hand)
2- don't signal for attention (don't raise my hand)
3- acknowledge the fact (say I don't know)
4- make evaluation of own ability, and difficulty of question
5- try to find out answer
6- don't answer, and don't acknowledge not knowing
7- No Response

I ask a Q. when...

1- want to know
2- need help
3-
4-
5-
6- (child invokes "talking" rule) - (we're done with our work)
7- (child gives situational response) - (we're doing reading)
8- unrestricted-"when I want to"
9- No Response

[empty sets - hold to maintain parallel categories]

_____ asks a Q., when...

1- wants to know
2- needs help
3- wants to tell, or direct
4- in (lesson) interaction
5- wants to test
6- (child invokes "talking" rule)
7- (child gives situational response)
8- unrestricted-"when they want to"
9- No Response

3. Getting Information/Assistance/Praise

When I want to ask _____ something, I...

1- signal for attention (raise my hand)
2- direct action (just ask it)
3- follow "politeness" RULE (wait till no one's talking)
4- No Response

When I need help, I...

1- signal for attention
2- ask adult
3- ask child
4- No Response

_____ says "good" when...

1- deserved-academic
2- deserved-non-academic
3- deserved-unspecified
4- outside evaluation-"she thinks"
5- convoluted ("I fall down")
6- not necessarily directed toward child
7- never happens
8- No Response

4. Who I talk To

When I'm playing (at recess) I talk to...

1- adult
2- child
3- no one
4- myself
5- No Response

When I'm working I talk to...

1- adult
2- child
3- no one
4- myself
5- No Response

When I finish work, I talk to...

1- adult
2- child
3- no one
4- myself
5- No Response

B. Categories for Coding "Appropriate Forms" Task

1. Sample Pupil-Generated Responses for "Getting Your Attention"

Physical Contact/Proximity-
I'll go up and tap her on the shoulder.

Signal-
stamp her foot.
They'll turn off the T.V.

Name-
Yells my name.
says, "Richard."

Call-
Hey, you guys.
Come here, I want to show you something.

Command-
Be quiet.
Now, listen here.

Request-
May I please have your attention?
Can't you please be quiet for two minutes?

Suggestion-
Let's all look up here.

Question-
Did you hear me?

2. Sample Pupil-Generated Responses for "Getting You To Do Something"

Physical Contact/Proximity-
Go to her desk and tell her.

Signal-
Raise my hand.
She rings the bell for us to get quiet.

Name-
I yell, "Mom."
She'll say, "Susie."

Call-
Come here.
I call her.

Command-
Go get me some paper.
Do your chores now.

Request-
Please help me with my work.
Would you please take out the garbage for me.

Suggestion-
Let's go to the store.
Let's watch T.V.

Question-
Do you want to go to the store?
Did you fix my bike yet?

III. Additional Information on Statistical Analyses

A. Procedures

The following types of procedures were used for transformation of measures for use in regression analyses and/or for comparison over classrooms.)

1. Relative rank in reading (Relrank)

RRIC = number of students in pupil's class with a Fall '78 reading score lower than theirs.

Relrank = RRIC/total number pupils in class.

2. Pupil status with teacher (STATWT)

This composite variable is a function of teacher ratings on: LA (listening attentively), PICD (participation in class discussions), NTR (following the "no talking" rules), USE (use of standard English), and PSR (predicted success in reading). Teachers rated these items on a scale of 1 to 4 (or more, if teachers formed more groups).

For pupil i in Teacher 1's class, to compute LA, for example:

$$LA_i = \frac{Y_{1i} - \bar{Y}_1}{\sqrt{n}\sqrt{\frac{\sum (Y_{1i} - \bar{Y}_1)^2}{n-1}}}$$

where n = class size; Y_{1i} = ranking on LA, $\bar{Y}_1$ = average ranking on LA in Teacher 1's class. Similarly, compute RICDi , NTRi , USEi , and RSRi , and define STATWT = LAi + PICDi + NTRi + USEi + PSRi . Now except for the inadvertent $\frac{1}{\sqrt{n}}$ factor this is the sum of the "standardized" variables. The five scales that make up STATWT are ordinal, so the use of means and standard deviations is a bit suspect, still this procedure is often done (see Nie, et al, SPSS manual, McGraw-Hill, 1975, pg. 185).

Then, STATWTM = STATWT x $\sqrt{\text{class size}}$ (to remove the relevant inadvertent $\frac{1}{\sqrt{n}}$ factor)

and, NSTATWT = -1 x STATWTM (this simply make it easier to interpret the status with teacher variable, by making larger values mean more status.)

3. Frequency of participation in class discussion (FCD)

Note that $0 \leq$ FCD.
RFCD = relative frequency of class discussion

$$\text{for pupil } j,\quad \text{RFCD}=\text{FCD}_j/\Sigma_j \text{FCD}_j$$

where $\Sigma_j \text{FCD}_j$ is the total number of pupil comments made in pupil j's class. $0 \leq$ RFCD ≤ 1.

TRANRFCD = transformed relative frequency of class discussion.

TRANRFCD = -1*log (1-RFCD)

Therefore, as RFCD increases, 1-RFCD approaches zero, the log (1-RFCD) gets large and negative, so -1 x log (1-RFCD) gets large and positive.

Note: A more often employed logit transformation cannot be used because in the expression, -1 x log [(1-RFCD)/RFCD] , the value of RFCD is sometimes zero, and division by zero is not defined.

B. Regression Analysis Tables

References were made in the report to several regression analyses. Tables for these are presented on the following page.

Table I

Analysis of Reading Achievement, Fall '79
(Pupil Status Variables)

Source	Sum of Squares	D.F.	Mean Square	F
Fall Reading '78	6446.62	1	6446.62	193.02
Peer Status	260.36	1	260.36	7.80
Status with Teacher	646.45	1	646.45	19.36
Mexican-American	82.30	1	82.30	2.46
Black & Other Minorities	76.72	1	76.72	2.30
Error	3206.30	96	33.40	

Table II

Analysis of Reading Achievement, Fall '79
(Sex and Ethnicity)

Source	Sum of Squares	D.F.	Mean Square	F
Fall Reading '78	8199.42	1	8199.42	165.10
Males	241.98	1	241.98	4.87
Mexican-American	91.85	1	91.85	1.85
Black & Other Minorities	87.47	1	87.47	1.76
Mexican-American Males	105.18	1	105.18	2.12
Black & Other Minority Males	6.71	1	6.71	.14
Error	5959.49	120	49.66	

Table III

Analysis of Reading Achievement, Fall '79
(Classroom Discourse Variables)

Source	Sum of Squares	D.F.	Mean Square	F
Fall Reading '78	6513.63	1	6513.63	162.48
Information Load	25.64	1	25.64	.64
Transformed Relative Frequency Class Discussion	772.35	1	772.35	19.27
Error	4129.26	103	40.09	

Table IV

Analysis of Reading Achievement, Fall '79
(Pupil Status and Participation Variables)

Source	Sum of Squares	D.F.	Mean Square	F
Relative Rank in Entering Reading	6224.83	1	6224.83	123.69
Males	90.90	1	90.90	1.81
Status with Teacher	151.87	1	151.87	3.02
Transformed Relative Frequency of Class Discussion	477.52	1	477.52	9.49
Error	5183.79	103	50.33	

Table V

Analysis of Relative Frequency of Class Discussion
(Pupil Status Variables)

Source	Sum of Squares	D.F.	Mean Square	F
Relative Rank in Entering Reading	.007	1	.007	6.29
Males	.008	1	.008	7.35
Status with Teacher	.004	1	.004	3.39
Error	.149	129	.001	

Table VI

Pupil Status with Teacher
(Pupil Status Variables)

Source	Sum of Squares	D.F.	Mean Square	F
Peer Status	240.53	1	240.53	17.42
Relative Rank in Reading	169.60	1	169.60	12.28
Mexican-American	1.74	1	1.74	.13
Black	.74	1	.74	.05
Other Minorities	.40	1	.40	.03
Error	1629.69	118	13.81	

Table VII

Pupil Status with Teacher
(Sex and Peer Status)

Source	Sum of Squares	D.F.	Mean Square	F
Peer Status	279.10	1	279.10	19.55
Males	.59	1	.59	.04
High Peer Status Males	39.67	1	39.67	2.78
Low Peer Status Males	10.79	1	10.79	.76
Error	1641.59	115	14.27	

Table VIII

Pupil Status with Peers
(Other Pupil Status Variables)

Source	Sum of Squares	D.F.	Mean Square	F
Entering Reading	473.22	1	473.22	12.60
Males	.30	1	.30	.01
Mexican-American	.01	1	.01	.00
Black & Other Minority	.56	1	.56	.01
Status with Teacher	490.35	1	490.35	13.05
Error	4432.26	118	37.56	